Computer Workout: TRS-80 Color Computer $2.50

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with COMPUTERS AND GAMES

ICD08274

DECEMBER 1983 VOL. 2 NO. 2

BEST GAMES OF '83!

The Winners You Chose!

Reviews: Joust, Popeye, Mr. Do, Time Pilot

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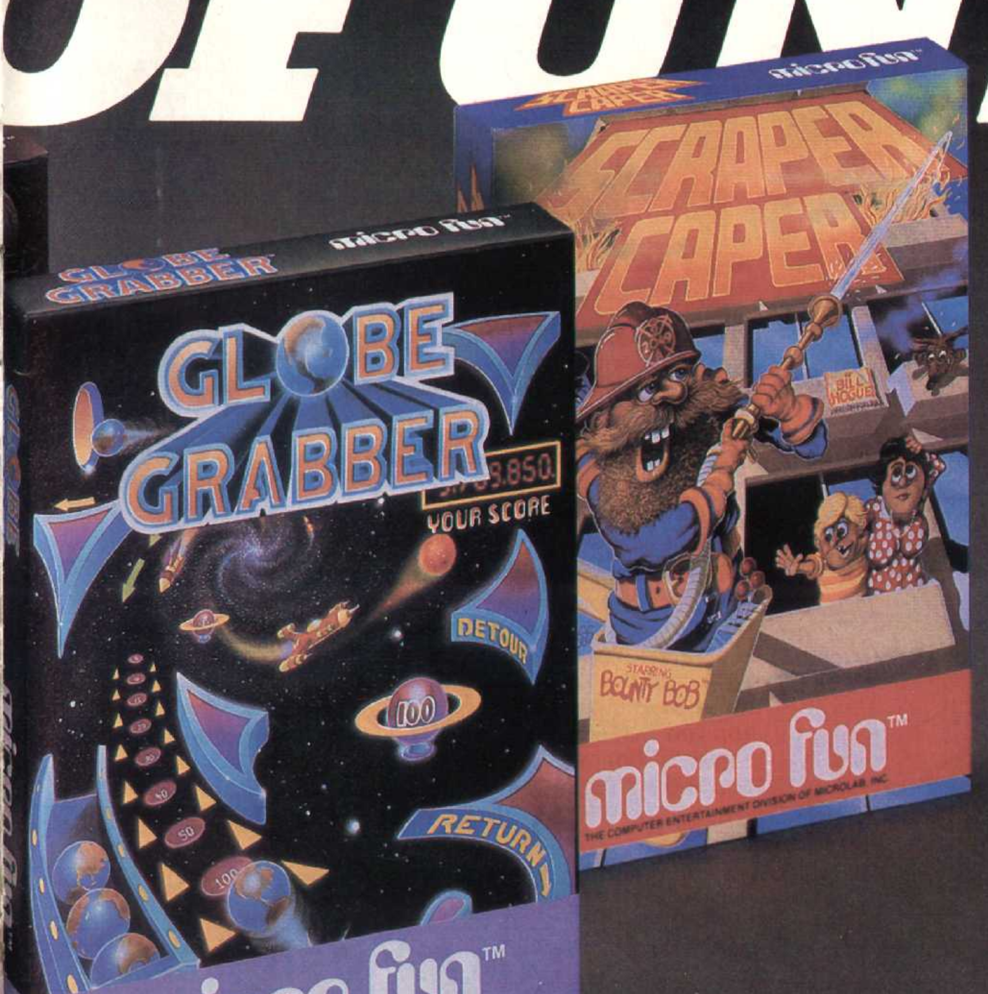
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Special Reports

FUTURE FACT/FUTURE FANTASY: MIND OUT OF MATTER *By Frank Moldstad* Although you may suspect that a lot of people you know have only artificial intelligence, that's different. Even now, not-so-mad scientists are at work in their laboratories teaching machines to reason **28**

NOW YOU SEE IT, NOW YOU DON'T *By Michael Blanchet and George Kopp* Many game and computer manufacturers have mastered the art of making things disappear. First you see pictures of a new product, then it's gone. Why does this happen and how? Hint: It isn't done with mirrors **38**

GAMER'S CHOICE Yes, friends, the official results are finally in. We counted ballots until our eyes were red, until we dreamed of *Donkey Kong Jr* and *Necromancer*, until even Visine wouldn't get the red out. But we did it. Here they are: the best games of 1983—the winners of the first annual Hall of Fun awards **44**

Regular Features

SCREENPLAYS: GYRUSS AND CRYSTAL CASTLES *By Michael Blanchet Gyruss* could well have been called *Vertigo* if it had been directed by Alfred Hitchcock but it wasn't. Still you can get some strategy tips on this game and learn how to get the best of the one-eyed trees in *Crystal Castles* at the same time. What a bargain **16**

OFF THE BEATEN TRAKBALL DEPT: A NEWFANGLED CHRISTMAS *By Randi Hacker* As a minor philosopher once said (and it is this saying that is largely responsible for keeping him minor) "If you don't move forward, well, what's the point?" Many Christmas traditions are medieval and need updating badly. Here are some tips from our "readers" on how to bring Christmas into the Computer Age.. **35**

GAMEMAKERS: MOONDUSTER *Interview by Phil Wiswell* There's nothing conventional about the game *Moondust*. This is not surprising. There's nothing conventional about its author, Jaron Lanier, either **83**

FIRST SCREENING: COLOR MAZE Color me, fast. That's the object behind Gene Deutch's game *Color Maze* written for the unexpanded VIC-20.. **91**

Equipment Reviews

COMPUTER WORKOUT: THE TRS-80 COLOR COMPUTER *By Jules Gilder* When hackers refer to CoCo they don't mean Chanel Solitaire. They mean the TRS-80 Color Computer which is a rapidly becoming a major machine in the world of personal computers **86**

Game Reviews

HITS & MISSILES Michael Blanchet goes to the birds in *Joust*; Randi Hacker ponders the eternal triangle of *Popeye*, Olive and Brutus; Gary Miller sings *Mr. Do* run run; Michael Brown moves into a *War Room* with a view; Confessions of a *Q*Bert* addict by Marc Berman; The Unknown Arcader finds that *Time Pilot* is on his side and George Kopp trims the plumes of mutants in *Miner 2049er* for ColecoVision. Plus computer games—Charles Ardai finds that no mongoose is necessary to battle *Super Cobra* and he *Saves New York* but doesn't win valuable prizes; Michael Brown puts the heat on *Mr. Cool* and more, more, more ..**50**

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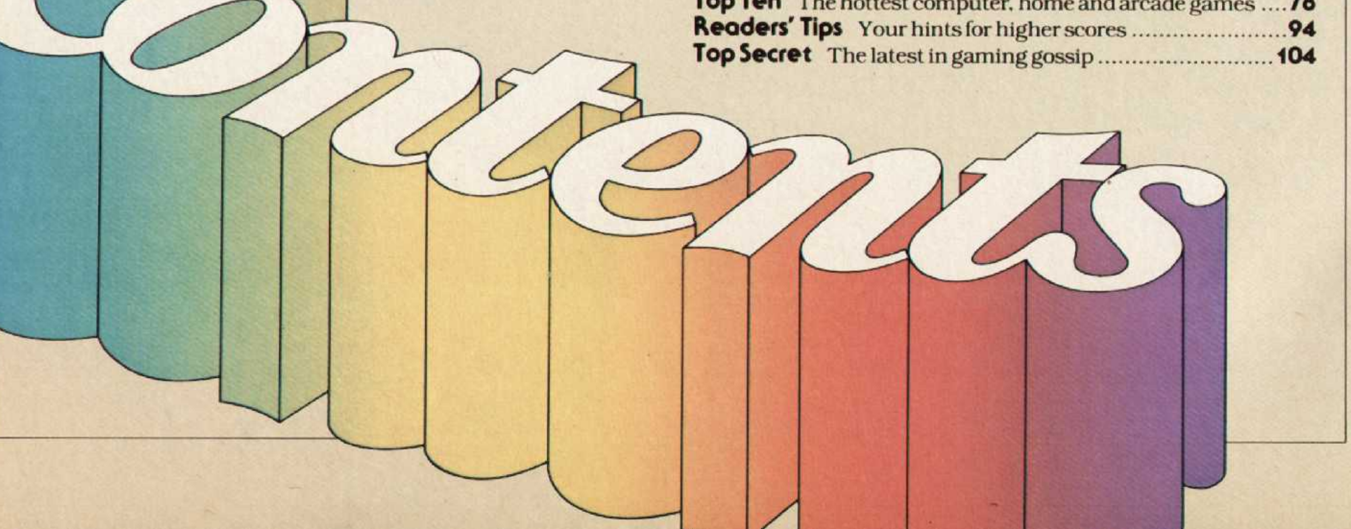

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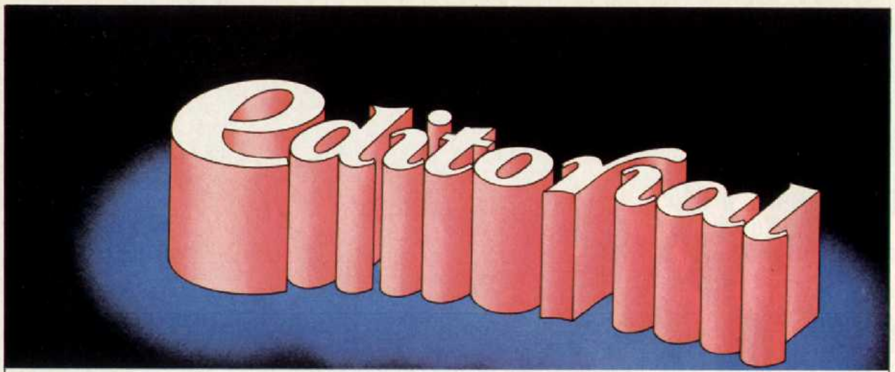

Christmas Fun

Even though we don't have a direct line with Santa, a highly placed unnamed official elf has assured us that many of our readers will become the owners of brand new computers before 1983 is over. We'd like to welcome all of you to this exciting world, which promises to become even more exciting next year and in the years to come. It's a little surprising to us that computers are still on the receiving end of a lot of unwarranted fear and loathing, and next month we're going to take a look at some of the ways George Orwell predicted a society of total control in his book 1984—and how the computer boom may actually prevent *many of his dire forecasts from actually coming to pass.*

As for this month's issue, we've got the results of our reader poll choosing the first inductees into our video and computer game Hall of Fun. The poll was a great success and we thank everyone who sent in a ballot. Besides the Hall of Fun, and in honor of the season, we're publishing some "reader suggestions" on how to update a traditional Christmas to conform to the computer age. We've also got an article about artificial intelligence, probably the most far-reaching branch of computer research.

So from all of us at EF *come our best wishes for a happy holiday and a happy and healthy new year.*

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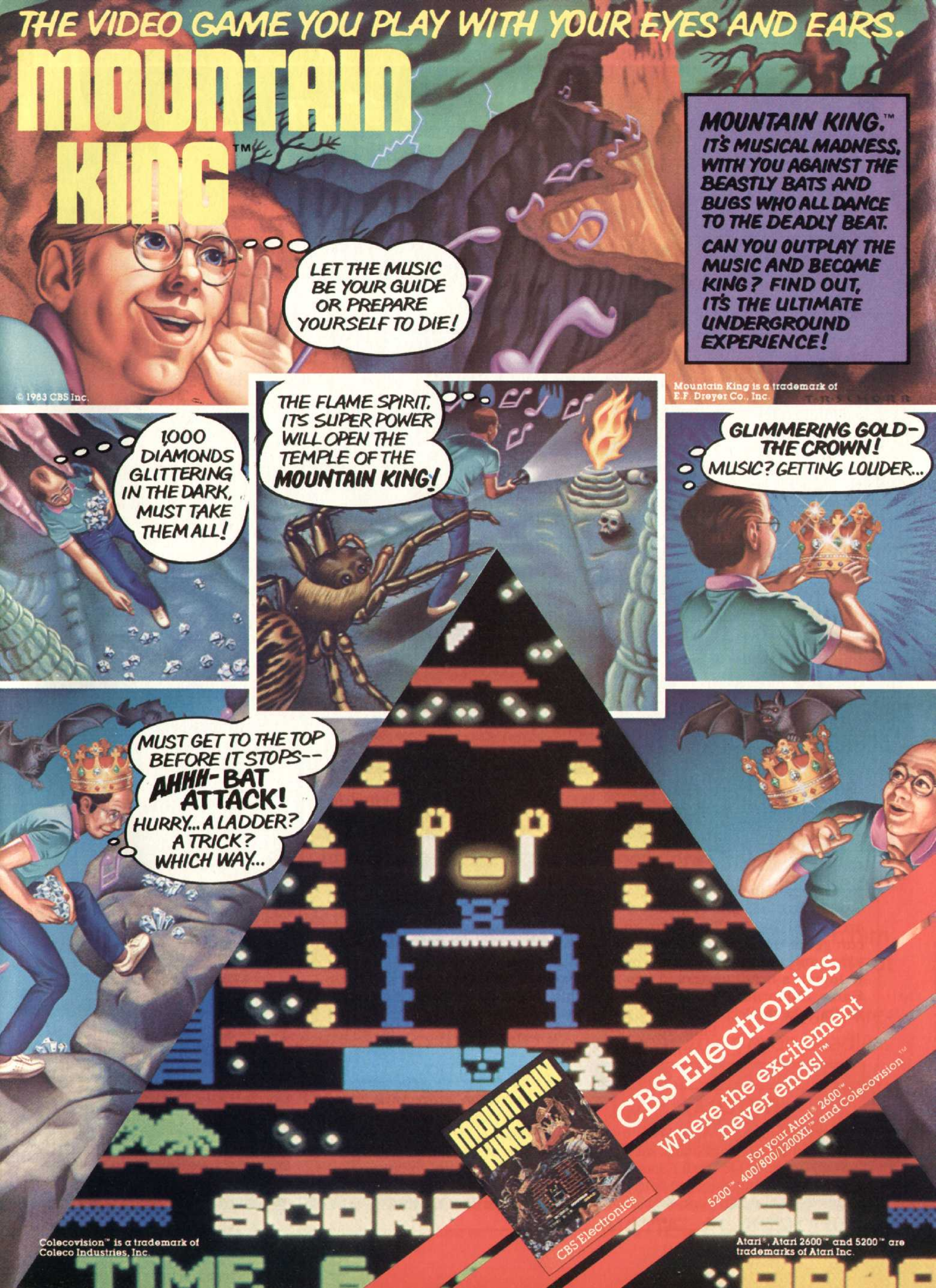
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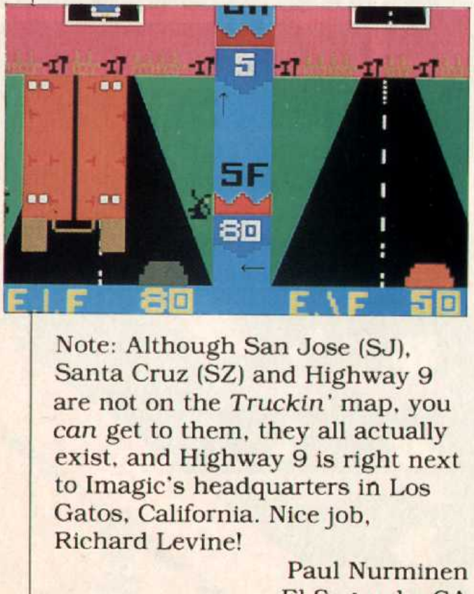
letters

IMAGIC FREEWAY, ONE MILE

I found a secret message in Imagic's *Truckin'*. To find it, all you have to do is drive north on Highway 101 until you reach the approximate location of San Jose, California. Then turn left off of 101 and you will be driving down Highway 9, headed west toward Santa Cruz. After this, you will drive into an imaginary city called "RL", which are the initials of the designer, Richard Levine—you'll also see an Imagic sign at the end of the road!



Note: Although San Jose (SJ), Santa Cruz (SZ) and Highway 9 are not on the *Truckin'* map, you *can* get to them, they all actually exist, and Highway 9 is right next to Imagic's headquarters in Los Gatos, California. Nice job, Richard Levine!

Paul Nurminen
El Segundo, CA

GOTCHA!

Guess what, guys: April Fools to *Video Game All-Stars* magazine! Remember your old April Fools Contest gag about the false company called "Imagin" and their fake video game called *Orient Express*? Well, *Video Game All-Stars* reviewed your fake game (they think it's a real game by Imagic) in their May/June issue on page 5. Their review is very similar to yours—so *EF* readers, don't read video game magazines that don't know what they're talking about.

Matthew Padhnik
Detroit, MI
Also: Brad Robinson
Sacramento, CA

Fooled ya, didn't we?

COLECO CLUB

In your August issue you printed the address for the Coleco Video Club. I sent in six dollars and for two months I haven't received the club magazine or anything. I think the club is phony.

C.W. Lee
Bronx, NY

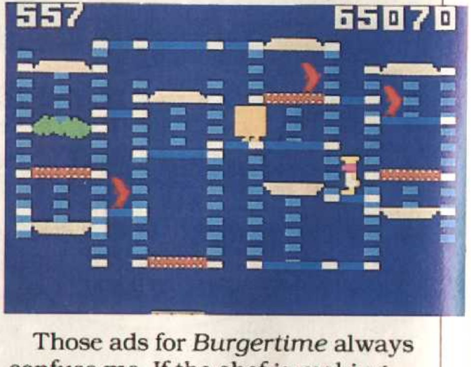
We understand that the club ceased operation temporarily, but that an issue of the magazine and other mailings were planned for this month at the latest. If you still haven't heard anything by the time you see this letter in EF, *let us know and we'll investigate.*

MODEMER WRITES

After having my Atari 800 for six months and learning most of BASIC, I got the Atari 835 modem. If anybody wants to link up with my computer, please write to me at 791 May Avenue, Perth Amboy, New Jersey 08861. I'll be looking forward to hearing from you.

Chip Iatauro
Perth Amboy, NJ

BURGERPALS



Those ads for *Burgertime* always confuse me. If the chef is making hamburgers, why is he also being chased by three hot dogs? I'm puzzled.

Kevin McGillivray
Thayer, IL

We dunno, Kevin. Maybe the dogs just happen to be a burger's best friend and are helping out.

WE'RE NOT KIDDING

My father says that in your First Screening column, where it says "...and maybe we'll send you

IN THIS NEW HOME VIDEO GAME YOU'RE THE MOST POWERFUL HUMAN IN THE UNIVERSE. UNFORTUNATELY NOT EVERYONE IS HUMAN.

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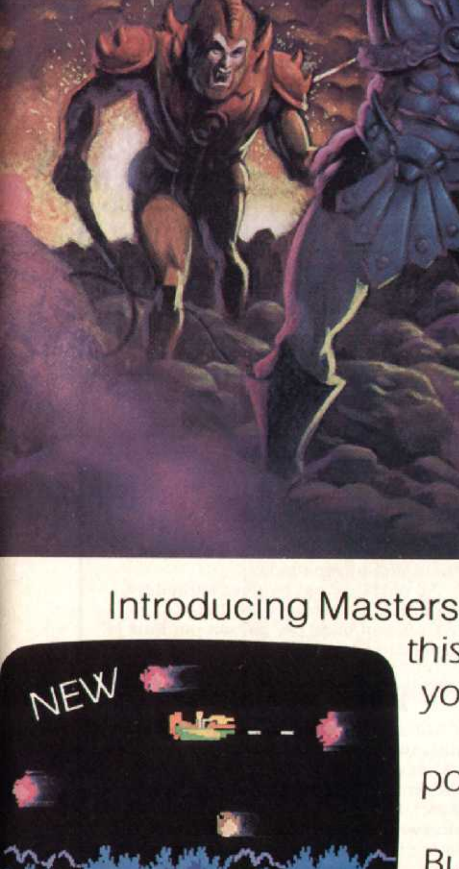
Which leaves you with just one thing to worry about: The most powerful villain in the universe.

His name is Skeletor™* and it's your job to try and catch him. But don't expect it to be easy. Because Skeletor may be evil but he isn't stupid.

If he can't destroy your Wind Raider™* with his deadly fireballs or Warp Trackers,™* he's got something even deadlier waiting for you inside the mysterious Castle Grayskull.™*

The Power of He-Man. It's a good thing you've got the power because you're going to need it.



Game shown on Intellivision, with SuperGraphics.
Game varies by system.

MASTERS
OF THE UNIVERSE™
THE POWER OF HE-MAN™
VIDEO GAME

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$100...", that you don't mean you'll pay me $100 if you publish my program. He says you mean you'll pay me *up to* $100. Would you tell him he's wrong; I tried. Also, why don't you give the First Screening programs a joystick rating like the other games in *EF*?

Marvin Dorffner
Baltimore, MD

We can understand how your father might have thought that, Marvin, but we do mean what we say: If we publish your program (and we don't publish all the programs we receive), we will send you a check for exactly *$100, no more and no less. And we don't rate First Screenings like we do regular games, because we don't think it's fair to judge amateur games the way we judge work by professionals.*

TI HITS COMING!

I'm having a problem with *EF* that I feel many TI-99/4A computer owners are having: there aren't any TI game reviews to be found in your Hits & Missiles section. How come? It would be great if you could include them in future issues.

David Jennings
Bristow, VA

You read our minds, David. Watch Hits & Missiles during the next few months—we'll be working hard to make up for this oversight.

ANTI COMPUTER GAMES

I really liked your January through May issues, because you covered Intellivision, Atari, Coleco, Vectrex, etc. But lately these companies and their machines seem to have been lost in your magazine. You've concentrated your best efforts on articles about arcades in Atlantic City, Hollywood, and who know where else! I live in Oklahoma—why do I want to know about an arcade in Hollywood? How about more information on upcoming Intellivision carts and add-ons and *less* on computers? I thought this was a magazine about home video games and *some* computer games. Come on, guys!

Chad Robbins
Lindsay, OK

According to our research, Chad, our readers are buying computers at a rate way faster than the general population. They still turn to us for reviews of computer games, and that's what we'll give 'em. Also, we do review all the video game cartridges that come out—but there are at least twice as many new computer games coming out!

SUGGESTION BOX

Why don't you have a "Tall Tales" contest? Then all those trigger-happy gamers out there could tell us about the one that got away! As a prize, how about sending the guy with the longest yarn a transcript of Johnny Carson jokes (just kidding)? I hope you'll think about it.

Blossom Appel
Highland Park, IL

In my opinion, you publish the best magazine in your field, but I have an idea which may improve your product. I read and enjoy your video game reviews. Why not publish an index of games reviewed in the previous six months, like *Consumer Reports* does? That way, a prospective game purchaser can find an article easily. I feel this would be a great help to many readers, and I hope you'll consider this idea. Also, keep up the good coverage of Intellivision!

Tony Riforgiate
Irvine, CA

We'll see what we can do. In the meantime, we're always open to suggestions.

Write to us! We can't promise that we'll answer every letter, but we will read them all. We welcome your comments, advice and questions. Send your letters to: Electronic Fun, *350 E. 81st St., New York, NY 10028*

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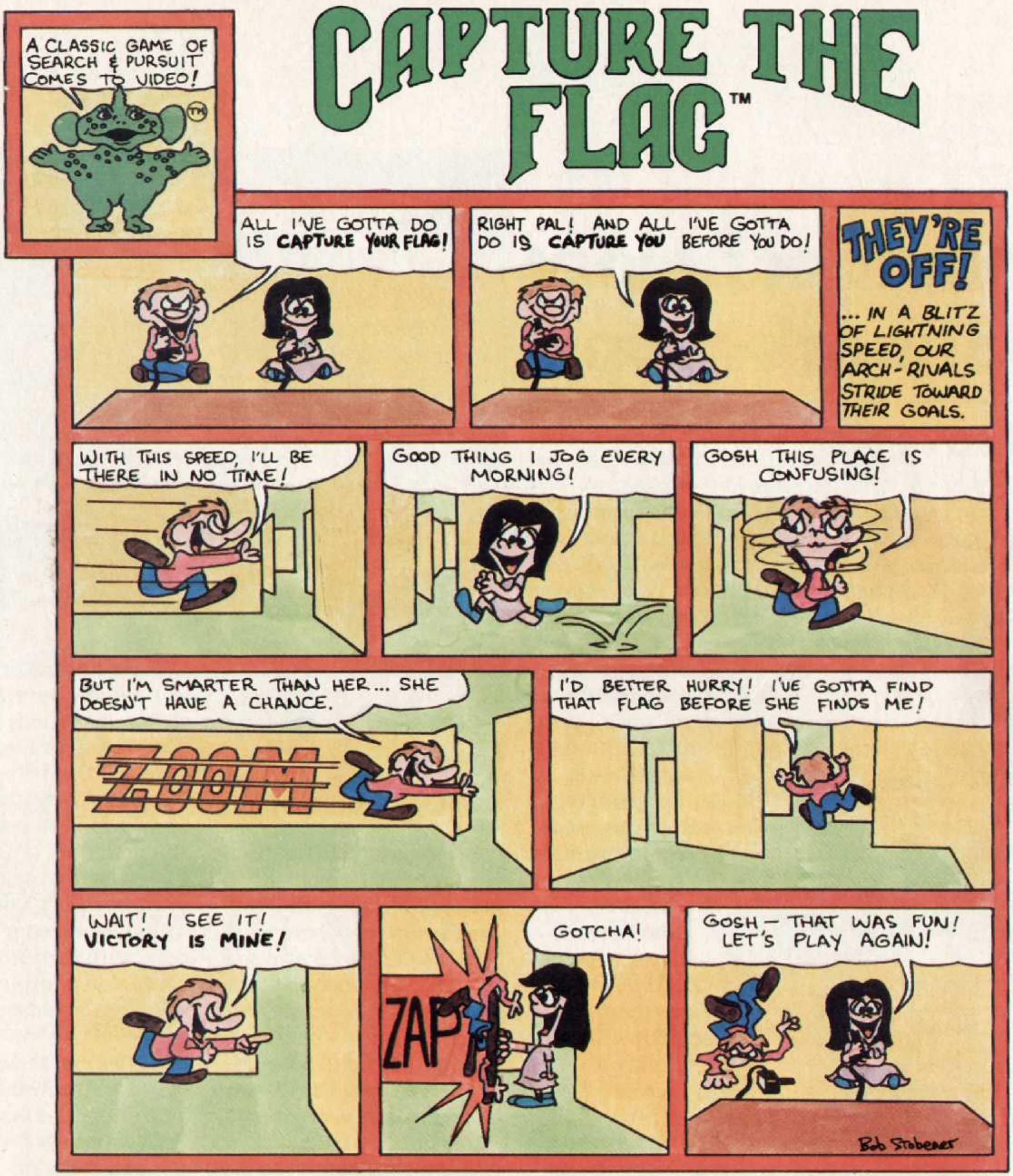
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RIGHT PAL! AND ALL I'VE GOTTA DO IS CAPTURE YOU BEFORE YOU DO!
THEY'RE OFF!
... IN A BLITZ OF LIGHTNING SPEED, OUR ARCH-RIVALS STRIDE TOWARD THEIR GOALS.
WITH THIS SPEED, I'LL BE THERE IN NO TIME!
GOOD THING I JOG EVERY MORNING!
GOSH THIS PLACE IS CONFUSING!
BUT I'M SMARTER THAN HER... SHE DOESN'T HAVE A CHANCE.
ZOOM
I'D BETTER HURRY! I'VE GOTTA FIND THAT FLAG BEFORE SHE FINDS ME!
WAIT! I SEE IT! VICTORY IS MINE!
GOTCHA!
ZAP
GOSH — THAT WAS FUN! LET'S PLAY AGAIN!
Bob Stobener

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For more information contact your local Sirius dealer or contact Sirius directly at 10364 Rockingham Drive, Sacramento, CA 95827 (916) 366-1195.

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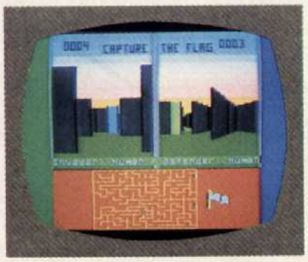
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IBM-PC Disk
VIC-20

1 Or 2 Players!!!

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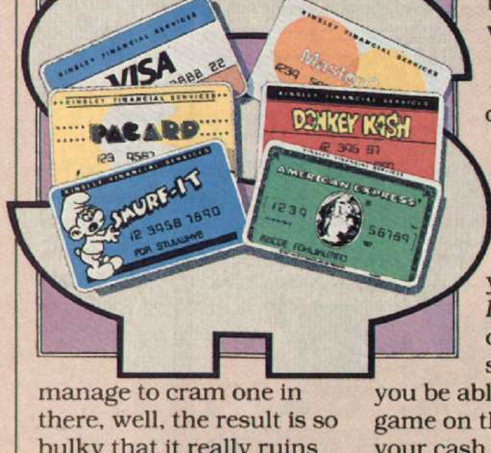
CAPTURE THE FLAG
GAME DESIGN BY PAUL EDELSTEIN

Hamburger helper and shoot'em ups

Don't Leave Home Etc.

Fact: Video game cartridges *don't* fit in your wallet. And even if you do manage to cram one in there, well, the result is so bulky that it really ruins the line of your pants. Perhaps this is the main reason for patent number 4,398,223. Patent number 4,398,223 is for a laser system that allows video information, video pictures and large amounts of other information to be recorded on a flat, coated paper or (operative phrase follows) plastic card. We can only assume that this means plastic cards like the plastic cards that have replaced money in modern forms of barter. This probably means that, in the future, we'll be carrying our favorite video games around in the picture section of our billfolds. Right there among the Visas and American Express we'll find Escape from the MindmasterCard and other games. Will this also mean that we can charge games and then pay off our scores so much by the month with exorbitant interest rates? The other question that comes to mind has to do with bank machines. If you insert your *Donkey Kong* card (magnetic strip down), will you be able to play a game on the screen of your cash machine while scores of angry patrons (all broke, late and in the most evil of moods) wait behind you in line to withdraw money?



Pac-Man River (He Just Keeps Rollin')

We've heard of floating ribs and floating crap games but this is the first time ever we've heard about a floating computer course. Sponsored by CLASS Associates in Wilton, CT, the week-long courses are held aboard the Mississippi Queen and combine hands-on computer literacy instruction with "a glamorous tax deductible vacation." The first cruises depart New Orleans on November 25 and return December 2 with subsequent trips scheduled for December 9 through the 16th and February 24th through March 2nd. According to the president of CLASS, the cruises were designed to meet the "growing demand for an easy-to-understand, comprehensive course on computer fundamentals and personal usage" to say nothing of the growing demand to stand near a waterwheel. The one-and-a-half hour daily seminars are held in the boat's elegant auditorium with more than 30 machines set up in prominent locations throughout the boat. The curriculum includes terminology, selection, personal applications. What? No gambling?

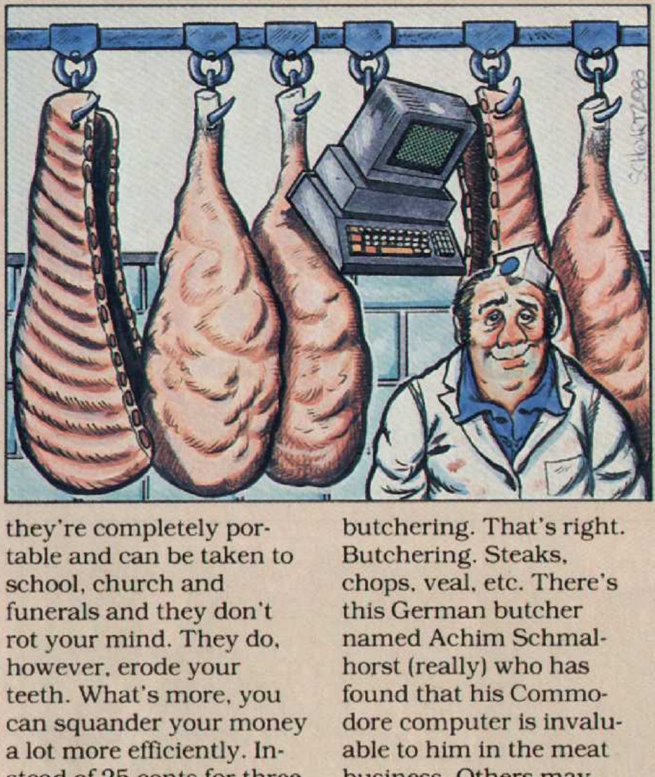
ZAXXON
FROGGER

Space (Invaders) Savers

If you've gotten tired of wasting quarters on arcade games, here's something new to waste quarters on: arcade chewing gum. Yes, gang, Topp (the

Glitches

makers of Bazooka) has come out with gum in all your favorite arcade flavors: *Donkey Kong, Frogger* and *Zaxxon* to name just three. While you can't really play these things, there are several advantages. They take up a lot less space so they're perfect for one-room apartments; they're completely portable and can be taken to school, church and funerals and they don't rot your mind. They do, however, erode your teeth. What's more, you can squander your money a lot more efficiently. Instead of 25 cents for three minutes of play, it's 69 cents for three days of chewing with cavities thrown in at almost no extra charge.

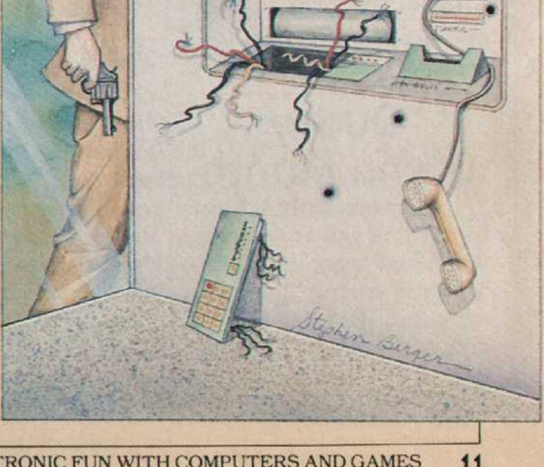


Cow (Key)Puncher

Computers are being used for the darndest things. If you don't believe me, just ask Art Linkletter. No. Wait. I'm confused. Let's see...He prefers kids, so forget that I said anything. Some of the stranger uses include accessing information at Sloan-Kettering Hospital, using computers to compute the odds in horse races, biorhythms and butchering. That's right. Butchering. Steaks, chops, veal, etc. There's this German butcher named Achim Schmalhorst (really) who has found that his Commodore computer is invaluable to him in the meat business. Others may think that PC stands for personal computer but not Herr Schmalhorst. He knows it stands for prime cut. Der Schmalhorst uses his Commodore to help him calculate the economics of different meat cuts. Over a period of time, Achim has built up quite a data base on alternative suppliers to check the yields, discounts and quality of different meat types. Using this information, he is able to make rational buying decisions based on fact rather than what one or another supplier might claim. This sort of calculation must necessarily demand that a whole new line of software be developed that is job specific. You couldn't for example, be expected to use a home management program to calculate pork bellies, could you? So we predict that the following packages will sooner or later be available to butchers: Herdstar, a meat processing program with a built-in text tenderizer and Visicalf, a young cow spreadsheet.

My Money Or Your Life

This is a true story. A man in St. Petersburg, Florida had one of those cash cards from his local bank. The first time the automatic teller swallowed his card whole and refused to return it, well, he was inconvenienced but took it in stride. By the second time, he got upset. Very upset. So, since reasoning with an automatic teller is about as fruitful as reasoning with a real teller, he didn't even try it. Instead he took out his .32 caliber pistol and pumped the machine full of lead. Thus a new crime was born—computercide in the first degree. New crimes naturally require new laws. Every criminal is guaranteed the right to a trial by jury of his peers. Just what are peers in this case? Five men, three women and four 6502 microprocessors? Who will preside? The fifth integrated circuit board judge? Will they require him to write a Rehabilitation Program? And, finally, will he be told to GOTO jail?



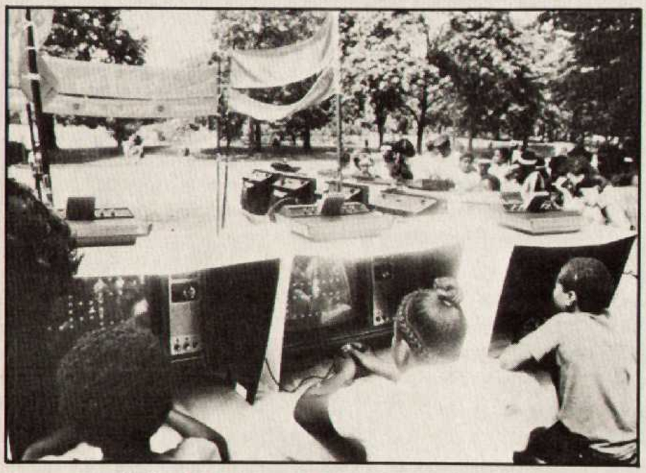
ELECTRONIC FUN WITH COMPUTERS & GAMES

E.F.G. Times

VOLUME TWO, NUMBER TWO

DECEMBER, 1983

SOLAR FOX MAKES SUNSHINE PALS



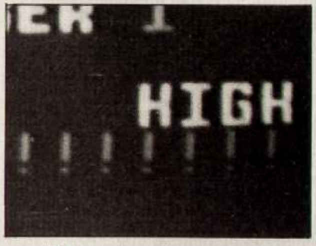
Solar Fox *hunting in Central Park*

Muggers and other unsavory types that inhabit Central Park (or so out-of-towners would have us believe) moved over for at least a day when the Police Athletic League of New York (PAL) held its annual Summer Carnival. And CBS Electronics saw to it that the world of video games was duly represented that sunny Wednesday August 10. That day marked the culmination of a competition between thirteen PAL centers in the New York area. CBS, sponsors of the contest, donated 13 VCS systems and one of their newest games, *Solar Fox*, to the centers who participated in the event. Week-long eliminations were held. This was all in preparation for the final showdown so you can imagine just how fierce the competition was. The victors then competed in the Face the Fox Playoffs held at the Summer Carnival. There were thirteen teams each consisting of eight master players. They competed against each other in 10-minute heats trying to garner the highest scores and thus claim the prizes for themselves. The Grand Prize was awarded to Andre Sanders. The 12 year old, who is a member of the PAL Lynch center in the South Bronx, was given his own VCS and a *Solar Fox* cartridge.

Quote of the Month

"I'm not certain that the infrared link will be available when the machine is first announced but it is very sexy and IBM will have it out as soon as the bugs are gone."
A Wall Street Analyst

MONTHLY CONTEST



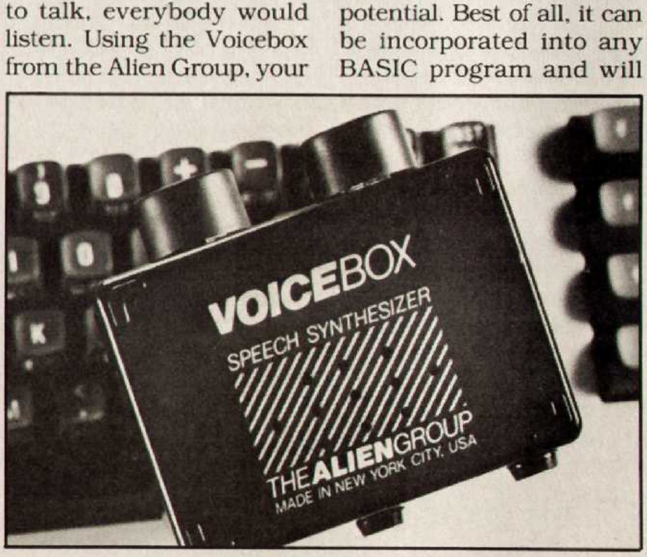
The winning score

The winner of the September contest really made our mouths drop open with his score. Todd Rogers of Bridgeview, IL racked up an incredible one million points on *Happy Trails*. This is represented by the seven exclamation points shown in the photo. All we can say is "Phew!"

This month's game will be *Demon Attack*. Now, because we've received a lot of requests for a computer game competition, you may enter no matter what system you play the game on—Intellivision, Atari VCS, Atari 400/800/1200. Send all entries to December Contest, Electronic Fun, 350 East 81st St., New York, NY 10028. We must receive them no later than December 15. In the event of a tie, a drawing will be held.

Giving The Gift Of Gab

If your VIC or C-64 were to talk, everybody would listen. Using the Voicebox from the Alien Group, your Commodore computer can become garrulous. The Voicebox plugs directly into the computer, has its own speaker, built-in volume and pitch controls and unlimited vocabulary potential. Best of all, it can be incorporated into any BASIC program and will say any English word. The cost is $95 but, for $25 more you can also get a music and singing system for the C-64 and write your own music.



Yakkety-yak, Commodore talks back

When you play Congo Bongo you'll die laughing.

For use with all Atari 2600-compatible systems
Congo Bongo
SEGA

Made for:
Atari® 2600™
Atari® 5200™
Atari® Home Computers,
Commodore 64™
and VIC-20,™ Texas Instruments 99/4A™
Intellivision®

A funny thing happens when you play Congo Bongo, the new home game from Sega. In fact, a lot of funny things happen.

You have to get to Congo, the mighty ape, before the jungle beasts get to you. Dodge falling coconuts as you scale Monkey Mountain. Shake the monkey from your back and chase Congo onto the lagoon screen. Then cross the water on the backs of hippos, lily pads and hunter-eating fish. And do it all before Congo makes a monkey out of you.

But watch your step – one slip and it's off to hunter heaven.

Congo Bongo. Straight from the arcade and into your home.

It's more fun than a barrel of, well, monkeys.

SEGA®

The Arcade Winners.

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YIPPEE TEA TIME O!

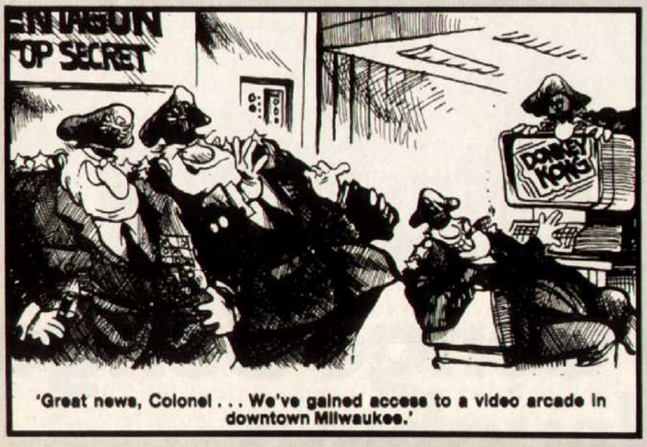
Rule Britannia!

Never mind that there are no cowboys in England, these two young English gentlemen still managed to rack up a winning score in *Stampede. Stampede* and four other Activision games—*Pitfall!, Starmaster, Megamania* and *Chopper Command*—were the five games that kids from all over the United Kingdom competed on in a countrywide competition. The UK Video Games Pentathlon was the first of its kind. Thirteen-year-old John Barber from Walsall, West Midlands and Andrew Davis, 10, beat 7,000 other entrants to win an all expenses paid holiday to California. Jolly good job, lads!

Win A Trip To Epcot!

Kraft wants you . . .

Kraft is looking for people who like to eat . . . and program. The company is sponsoring a contest in which computer programmers 18 and under are asked to create a concept which could be translated into a nutrition computer program. The Grand Prize is a 4-day, 3-night trip to EPCOT/Walt Disney World for the winner and family and $500 cash. The Grand Prize winner will also go to New York on a promotional tour. Second prize is a $1,000 gift certificate and 20 runner-up prizes of $50 gift certificates will also be awarded. Entries must be received between January 1, 1984 and March 31, 1984. For rules and regulations, send a self-addressed, stamped #10 envelope to: The Kraft Kideo Game Contest, PO Box 845, South Holland, IL 60473.


ENTAGON
TOP SECRET
DONKEY KONG
'Great news, Colonel . . . We've gained access to a video arcade in downtown Milwaukee.'

Peace games? (Reprinted with permission of the Copley News Service)

Department of Corrections

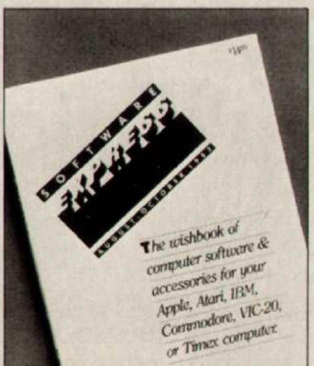
We received hundreds of requests for diagrams of the Command Console but many of you failed to follow our directions and didn't send self-addressed, stamped envelopes. When this happened, we were unable to mail you the blueprints. If you don't receive your diagrams in, say, another month, please send for them again and don't forget the SASE!

Line 760 in *3-D Tunnels of Terror* (page 89 of the September issue) was printed incorrectly. It should read:

```
760 VTAB (23): PRINT
"SCORE:"; S; TAB (26):
"HISCORE:":HS
```

Program Programme

We've always said, "What this country needs is a good $14.95 index of computer software." And here it is. The Software Express from SKU is a 300-page guide which describes more than 800 of today's most popular software programs and computer accessories in an easy-to-use format. The book is divided into computer-compatible sections listing all, say, Apple programs in one place, Atari in another and so on. Titles within each computer section are divided into four categories: entertainment, education, business/home and utility/systems software. Information about each program is further divided into two sections: basic info on manufacturer and the computer model it's designed for and a brief description of the plot.


SOFTWARE
EXPRESS
The wishbook of computer software & accessories for your Apple, Atari, IBM, Commodore, VIC-20, or Timex computer

Guidance counsellor

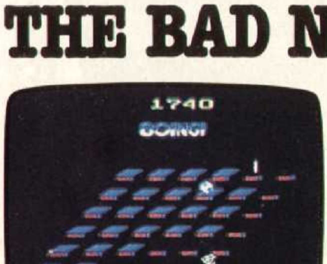
Have you got an item for the EFG Times? *News events, game tips, photos and other information are gladly accepted. Send material to:* EF, *350 E. 81st St., New York, New York 10028.*

FIRST, THE GOOD NEWS.
ASTRO CHASE

First Star Has 4 New Games.

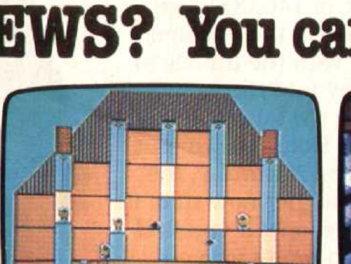
Fernando Herrera, designer of *ASTRO CHASE*™ and our design team again define "State of the Art." Superior graphics, real-time animations,™ multiple screens, intermissions, arcade-quality sound, innovative gaming, challenge and excitement—we deliver it all!

THE BAD NEWS? You can't play them all at once.



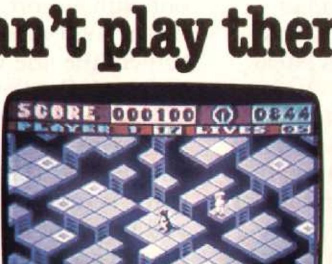
BOING!™

Designed by Alex Leavens
& Shirley A. Russell
ATARI Atari VCS 2600



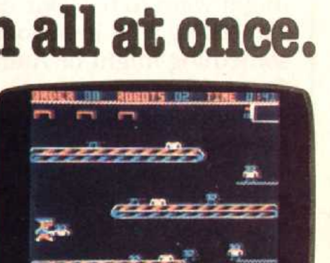
BRISTLES™

Starring Peter the Painter
Designed by Fernando Herrera
ATARI Atari Home Computers
Commodore Computers



FLIP and FLOP™

ATARI Designed by Jim Nangano
Atari Home Computers
Commodore Computers



PANIC BUTTON™

TRS-80 Color Computer
by Paul Kanevsky
Vic-20 Home Computer
by Wayne Lam

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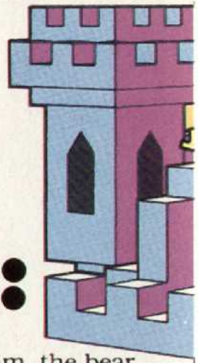
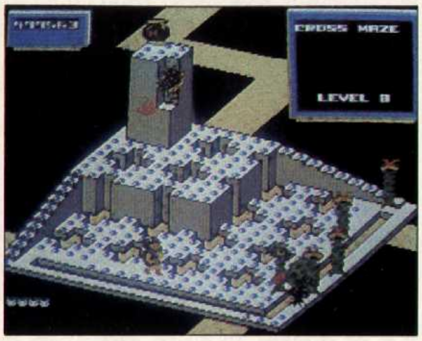


Crystal Castles and Gyruss:

By Michael Blanchet

CRYSTAL CASTLES

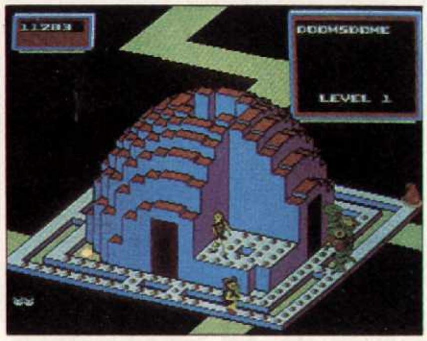
When historians write the history of video games, the heading under "Summer of '83" will probably read something like this—"Violence, violence, and more violence." Yes, it's been a rough summer indeed. After dying a thousand different deaths in *Dragon's Lair* and dueling the likes of Darth Vader and the Klingons in *Star Wars* and *Star Trek*, some of you might want to try your hand at something a bit less violent. That something might be Atari's latest, *Crystal Castles.*



Unimaginative maze games abound, and to be truthful, *Crystal Castles* is another maze game. But it benefits from the fresh and novel approach its designer took to the tired "collect all the whatevers and avoid the monsters' theme.

Cast as Bentley the Bear (move over, Ewoks) your mission is to scarf up all the jewels that are scattered over each of the game's sixteen different structures (or, if you will, Crystal Castles). You pilot Bentley with a trakball instead of a joystick. Thus, speed as well as direction can be changed to suit the situation at hand.

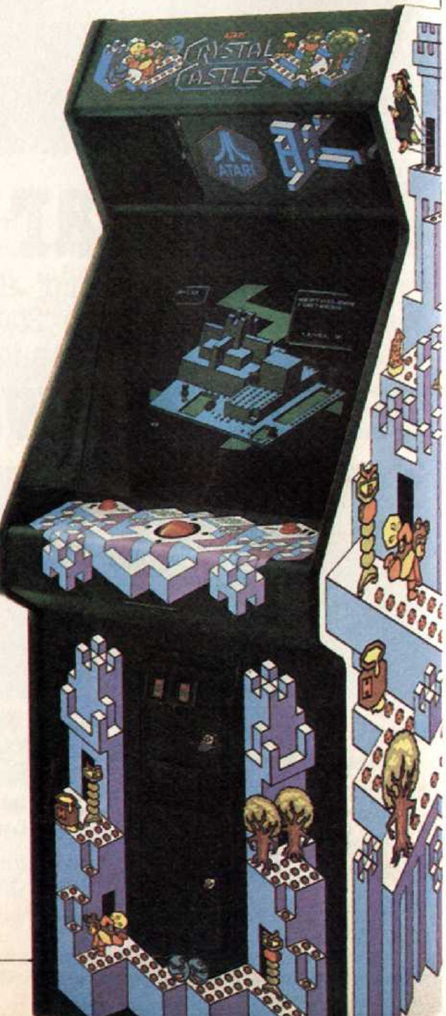
Naturally, wherever one finds jewels one is bound to find villainous sorts as well. Here you'll find an unlikely gathering of ghouls to sidestep during your quest, including gem eaters, walking trees, skeletons, bouncing balls, bees, and a crotchety old witch.

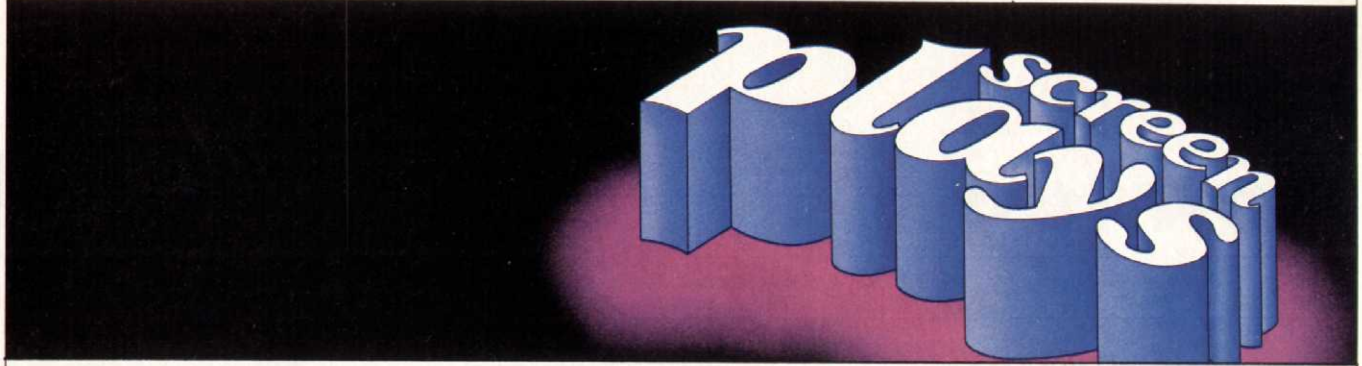


The playfields are grouped, *Tempest* style, sixteen to a level. Thus, hefty scores will elude those of you who don't know how to gain access to the higher plateaus of play. If you like the idea of starting out with a score of 140,000 points, do the following. On the opening screen (the one with the initials in it) march Bentley into the tunnel. When you reach the far back corner, press jump. Doing so will put you on level three. Naturally, the game is much tougher now than if you began at level one. If you find the pace a bit too rough for you, forgo the warp on your next game and concentrate on the basics.

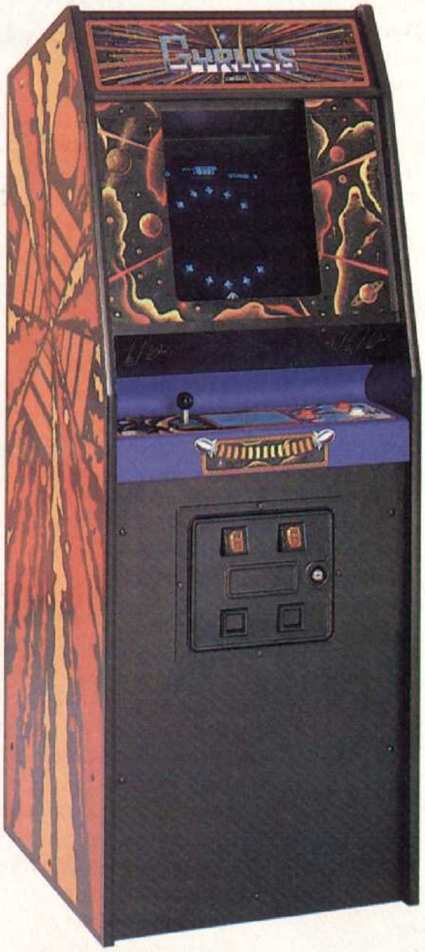
First, a word or two on the trakball. Unless you have a clean field (i.e., no bad guys around) avoid whipping the controller and sending Bentley on an uncontrollable, high-speed jaunt. This is particularly dangerous to do on any level with a lot of steps and turns. When under full steam, the bear seems to favor turning as opposed to moving straight ahead.

Flinging the controller *can* be beneficial under certain circumstances. I found it quite effective when used in conjunction with a jump, since the resulting leap would make even Bob Beamon a bit jealous. And when death seems inevitable, jumping is your only hope for survival. The jump function in *Castles* performs in much the same way as it does in Taito's





Warp in peace



Zookeeper. Press the button and Bentley jumps up and comes down in the same place. A running leap then will carry the bear a distance proportionate to his speed at takeoff. This business of jumping is a little unpredictable, so I recommend experimenting on easier boards first. One rule of thumb—you can't jump from a low level to a higher one and vice versa.

To keep you honest, Atari has thrown in a "baiter" of sorts. In this game it's a tenacious swarm of bees. No hints here—just hurry, since their appearances are a function of time. For some extra points, grab that pot of honey when the bees aren't hanging around it.

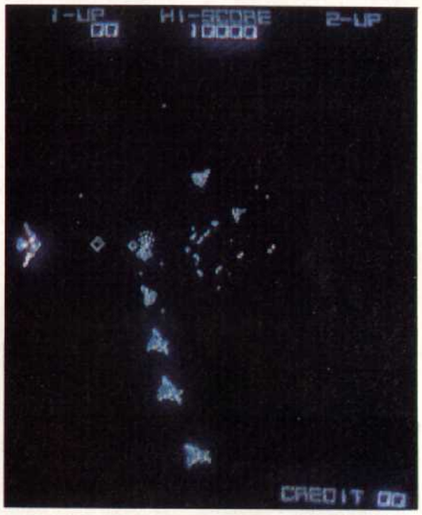
Those sick looking cyclops with the bloated throats are the gem eaters. They are a threat only when they're moving from gem to gem. If you catch them snacking, run into them. By doing so you'll receive five hundred points and, at the same time, have one less enemy to worry about. When gem eaters appear, it's best to wait for them. Position yourself so that a bunch of gems lie between you and them. The rest is timing.

Hints: You can render the trees temporarily dumbfounded by leaping over them. Finally, save the hat for emergencies only. While wearing it, you are invincible and can walk right through any beast in your path. It is also the only way you can kill the witch. But remember, its effects are short-lived.

GYRUSS

Calling all *Galaga* fans! Centuri has just revamped that Namco classic and slapped a new name on it—*Gyruss*.

While the bugs and bees and funky sound effects are missing, the general idea remains the same—blast through a couple of waves, get a crack at the appropriately named Chance Round, maybe cop some dual firepower, blast some more aliens, etc., etc. A total clone this is not. Still, numerous similarities do exist. As in *Galaga*, the idea is simply to survive for as long as possible. Unlike *Galaga*, *Gyruss* is divided not only into rounds, but into warps as well. Theoretically, the final objective of the game is to reach earth. En route you'll pass (in no particular order) the planets that comprise our solar system. Upon arrival at Venus, for example, you are treated to a chance round, the *Gyruss* equivalent of *Galaga*'s Challenging Stage.



What's different about *Gyruss*? The name should give you a clue. Instead of sliding across the bottom edge of the screen, your ship travels along a circular flight path that encompasses the entire perimeter of the screen. Admittedly, this is a novel gimmick, but one of little practical value strategically.

As in all shoot-em-ups of this nature, no solid strategy exists outside of the obvious—blast them before they blast you. Since time is not a factor in *Gyruss*, I recommend attacking at a leisurely pace. All too often a hastily executed move spells disaster.

One attack plan I found effective involves drawing enemy fire and then ducking it. That brief moment

Continued on page 103

How to get the sprite stuff

The Apple IN YOUR HAND
E. Floegel
Applications in BASIC FORTH and Machine Language
Introduction to FORTH and 6502 Machine Language

ELCOMP

Computer Book $12.95

You think computers are the hot industry. Well, you're wrong. Publishing books about computers is what's hot. Believe me. Everyone and their younger brother has written, is writing or will be writing a book about some aspect of computers. Already we've got books on programming in several tongues, books that promise to allay the common man's fear of computers and books that explain everything to you. There are also computer dictionaries and kids' books. It's a booming market. One segment of this market involves computer specific books—that is, books that deal exclusively with one computer. *The Apple in Your Hand* is one of them. This book, written by E. Floegel is, according to the company, "not just another book on the Apple II." Not only does it cover many languages, it also teaches advanced programmers things about specific software. In it is an introduction to 6502 machine language as it is on the Apple, and introduction to FORTH which, as all dedicated hackers know, is the up and coming computer language and some important application software in machine language, FORTH and BASIC.

Elcomp
53 Redrock Lane
Pomona, CA 91766

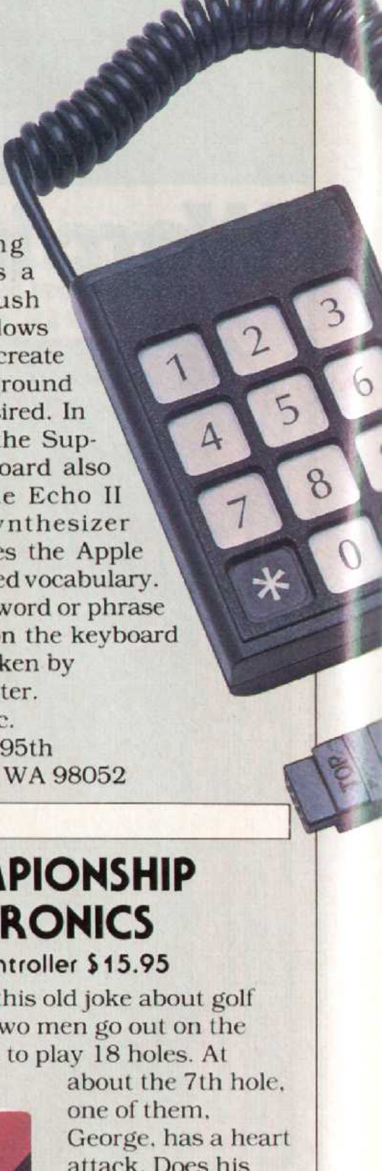
SYNETIX

Apple Sprite Board $395.00

Playing games with only one animated object on the screen is like juggling with one ball—it's easy but it's not much of a challenge. That's why SuperSprite is such a great peripheral for Apple owners. This plug-in board allows numerous animated objects to occupy the screen at the same time. Each sprite moves independently of others and independently of the background. SuperSprite is offered with a simple new language called Ampersprite that turns Applesoft BASIC into a language that lets the user assemble a wide variety of sprites at the same time. Something known as a "paint brush option" allows the user to create any background setting desired. In addition, the SuperSprite board also houses the Echo II speech synthesizer which gives the Apple an unlimited vocabulary. Whatever word or phrase you type on the keyboard will be spoken by the computer.

ARCADE EXCITEMENT FOR APPLE COMPUTERS
SuperSprite

Synetix Inc.
15050 NE 95th
Redmond, WA 98052



CHAMPIONSHIP ELECTRONICS

Coleco Controller $15.95

There's this old joke about golf fanatics. Two men go out on the golf course to play 18 holes. At about the 7th hole, one of them, George, has a heart attack. Does his partner give up the game and take George to the Emergency Room? No. But it certainly put a damper on his game because for 11 holes after that it was "hit the ball and drag George. Hit the ball and drag George." Fanatic video gamers are like that. And when it comes to ColecoVision and what some feel are its in-

new products

adequate controllers many of them would rather plug in the keypad, choose the options, unplug it and plug in an alternate joystick than give up the game. Shoot the alien, drag George as it were. The days of this nimble finger exercise are over. Championship Electronics gives everyone an alternative to dissatisfaction. How? With its Champ Adaptor No. 1. The Champ Adaptor No. 1 is a Keypad Controlling Adaptor. It converts any Atari 2600 compatible joystick into a ColecoVision Controller except those that require dual action buttons. And Championship is not only making improvements on Coleco but TI also. Frustrated TI game players also have an alternative in the form of Champ Adaptor No. 2. This is a one-piece adaptor (without cord) that allows TI users to plug any Atari joystick into their computers. The suggested retail price for Champ Adaptor No. 2 is $4.95. Besides these two items and its already existing line (which consists of the Super Champ and the Remote Control Super Champ joysticks) Championship is planning to introduce a third controller in the Champ series. Called the Mini-Champ, it is a scaled-down joystick designed specifically for those players among you with smaller hands. It comes with three firing buttons so it's good for both left-and right-handed players and it has a 4½-foot retractable cord. No price was available at presstime.

Championship Electronics
711 Grandview Drive
South San Francisco, CA 94080

LEADING EDGE

Storage Units $19.95 to $29.95

Disks, of course, are delicate things, easily damaged and fragile. Therefore, no matter how perfect the size, using them as coasters is not recommended. In addition to making them very damp, it also ruins the data stored on them. And while most of you probably wouldn't do this deliberately, when they're left out unprotected, they often end up employed in just such a way. And although cartridges are somewhat sturdier and more durable, it's still nice to have them filed away in an orderly manner. This is where Leading Edge comes in. The Leading Edge Trunk storage units are designed for both disks and cartridges and come in many models. Constructed of durable plastic, they are also portable thanks to a built-in carrying handle. There are four Trunk models divided into two specific types: 1) specifically designed for game storage and 2) specifically designed to store disks. The first model holds up to 10 cartridges of the type that is compatible with the Atari 400, Atari 800 and Atari 1200 computers. The second holds up to 18 games in both cassette and cartridge format. The third is designed specifically for disks of 5¼" size and holds as many as 60 of them and the fourth, designed for larger disks, will store up to 60 8" disks. The suggested retail price for the latter is $29.95 while the rest will sell for about $19.95. To go along with the Trunks, Leading Edge offers Peanut Paks of disks. The disks—all 48 tpi—come in three different formats which are compatible with over 90 per cent of the microcomputers currently on the market. These Peanut Paks sell for under $10.00.

UTOPIA
STAR STRIKE
GOLF
missile command
SUPER BREAKOUT
combat
PAC-MAN
BARBRA STREISAND

Leading Edge
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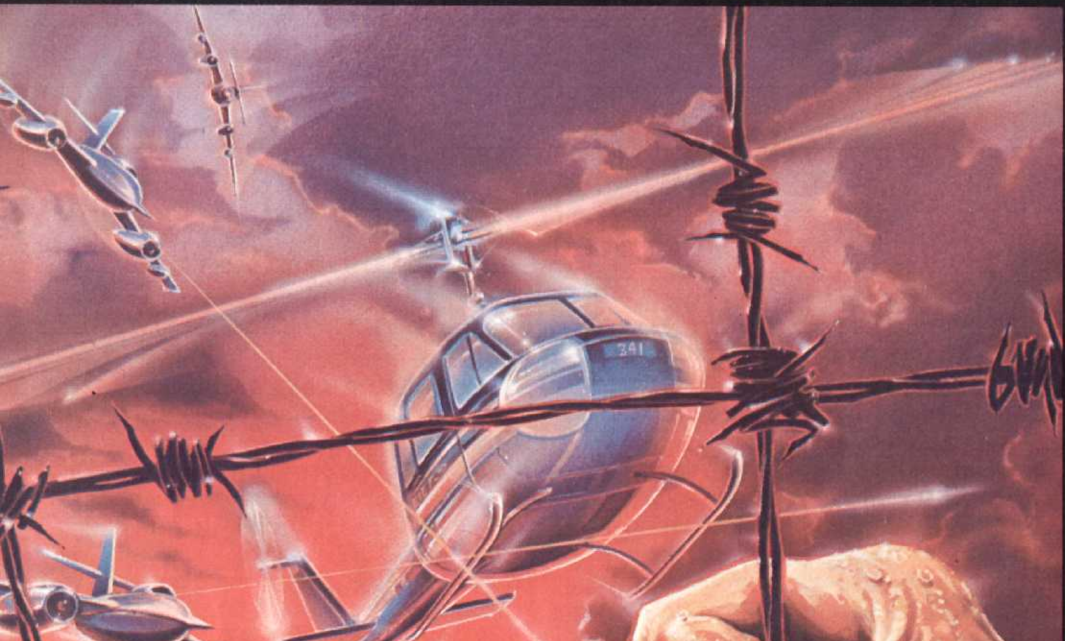
Award-Winning Hits for your Commodore



CREATIVE SOFTWARE
presents
CHOPLIFTER
CARTRIDGE FOR USE WITH THE COMMODORE VIC-20
NO ADDITIONAL MEMORY REQUIRED

CHOPLIFTER*
For the Commodore VIC-20.

Those are our men they're holding hostage! We don't care how you do it, but you've got to shoot your way in there and bring 'em back alive. You've got three choppers, probably not enough but it's all we can spare. And the enemy camp is pretty heavily fortified. With tanks, jetfighters and truly nasty laser bombs. Okay, maybe it's a suicide mission, but somebody's got to do it. Dozens of innocent lives are at stake. We're counting on you... don't let them down!

1983
AWARD
WINNER
★★★★

Now you can play some of America's hottest computer games on your Commodore, and get a FREE introduction to Home Management Software. It's our way of showing you that action-packed gaming is only the beginning of your Commodore's capabilities.

CREATIVE

*SELECTED AS SOME OF THE "MOST INNOVATIVE COMPUTER PROGRAMS" 1983 CES SOFTWARE SHOWCASE AWARDS.

with a Free Software Bonus.

SERPENTINE*
For the Commodore VIC-20.

In the Kingdom of Serpents, the only rule is eat or be eaten. Three huge and evil red snakes are slithering through a complex series of mazes, closing in on your good blue serpent from all sides. Move fast and watch your tail! Try to survive long enough to let your eggs hatch into reinforcements. Swallow the magical frogs or your enemy's eggs and you can get the strength to go on... but look out to your left... and ahead of you! They've got you surrounded, and it looks like meal time.

CREATIVE SOFTWARE
PRESENTS
SERPENTINE
CARTRIDGE FOR USE WITH THE COMMODORE VIC-20
NO ADDITIONAL MEMORY REQUIRED

1983
AWARD
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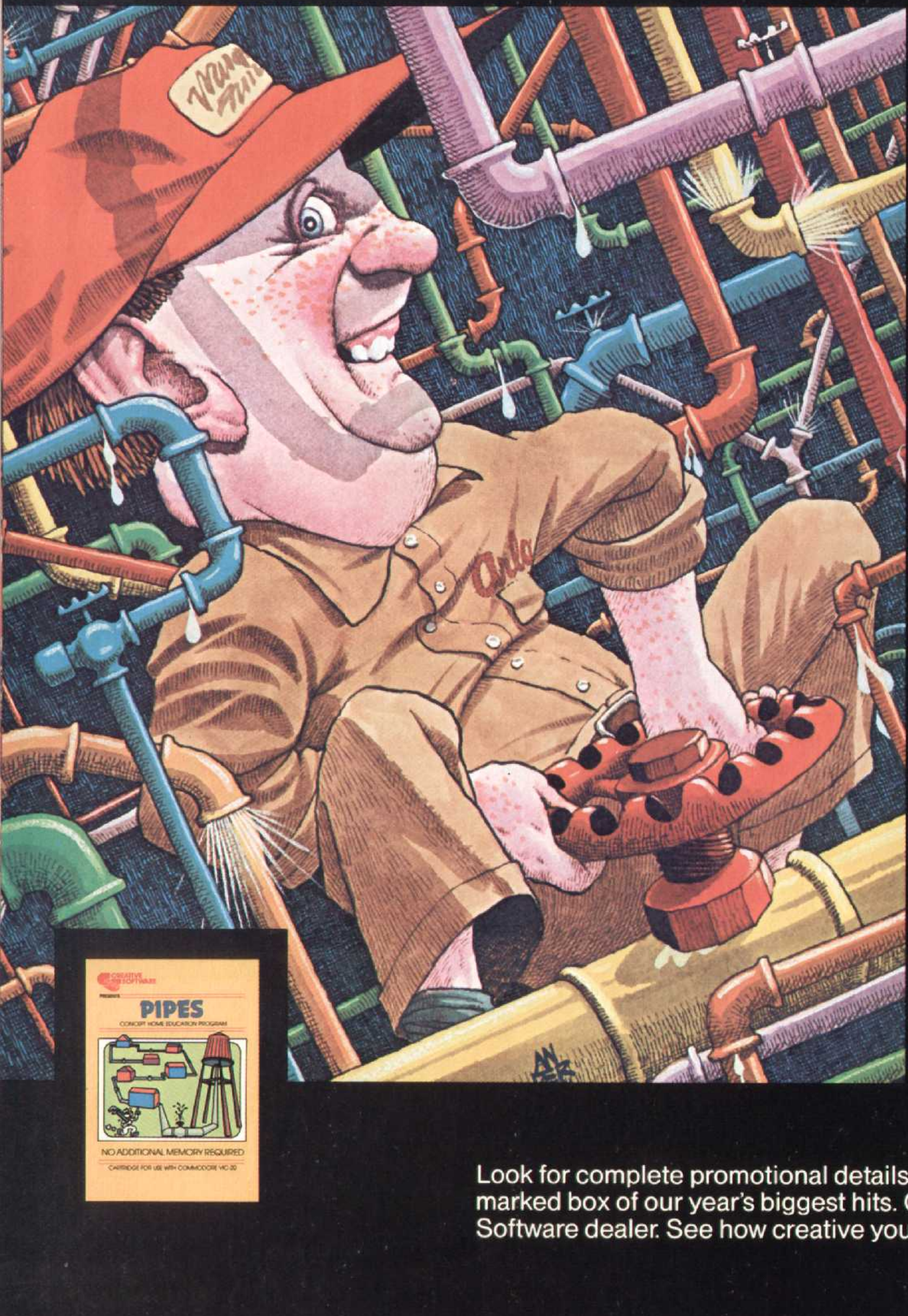
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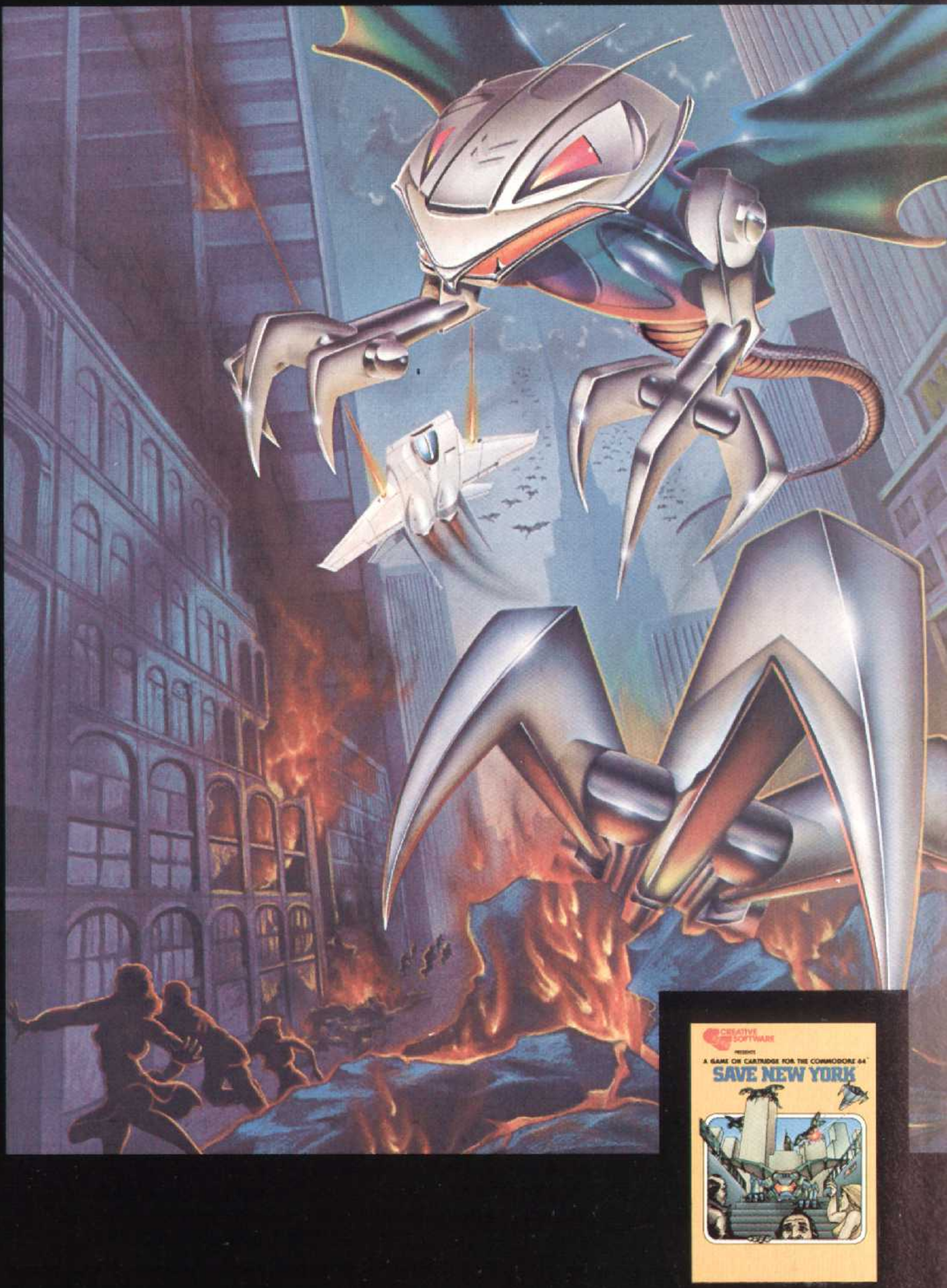
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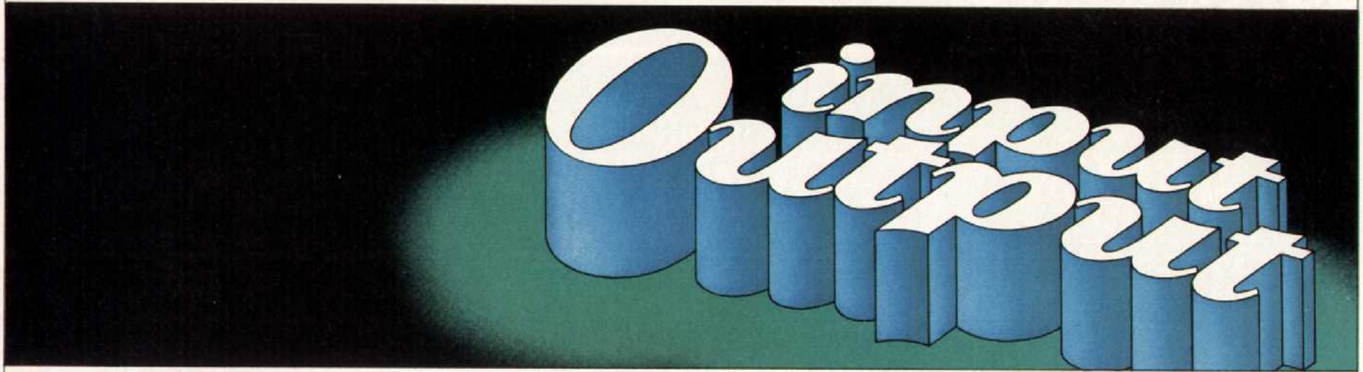

Mr. Do's diamonds aren't forever

Can all software and hardware for the VIC-20 be used on the Commodore 64? If not, why not?

Scott Eggleston
Glendale, AZ

Almost none of the VIC software will run without modification on the 64 (and vice versa), mainly because the two machines use entirely different RAM address locations for screen formatting, colors, sounds and some other functions. Of course, almost any VIC software for which you have a program listing can be modified to run on the 64—all you need is some programming skill in BASIC and the reference manuals for both computers. The VIC and 64 manuals cost $16.95 and $19.95 respectively, and can be found in every good computer bookstore and at Commodore dealers. On hardware: Everything is cross-compatible—modems, printers, monitors, game controllers, etc.—except memory modules and software cartridges.

I've found a situation in MR. DO that amazed me. After unplugging a MR. DO game recently, I inserted a quarter and played one game. In screen one, I found a diamond. Then, when I was playing my free game, I found a diamond in screen one AGAIN! What are the chances of this happening yet again?

Jim Heit
Laurel, MT

Not very good. According to the game's designer, the bonus diamonds are programmed to appear randomly when the last apple in a screen falls and breaks open. The designer won't say *how* randomly, but the occurance of *any* diamond on any *Mr. Do* screen is apparently pretty rare. Getting two in a row (well, in two games in a row) on the first screen is probably in the hen's teeth category.

As a concerned video gamer, I was wondering if there is any reward for telling the location of illegal coin-op machines? If not, is there still some way of reporting the existence of these machines to someone who can do something about them?

Mike Patrick
Upland, CA

If by "illegal" you mean unauthorized copies of arcade games from legitimate manufacturers, then yes, there is a way to report them—although nobody's offering rewards yet. The Amusement Game Manufacturers Association (205 The Strand, Alexandria, VA; 703-548-8044) works closely with the FBI in apprehending the makers of illegal coin-ops, and is always ready to listen to gamers who know the locations of these machines (you should address your report to AGMA legislative counsel Peter Kopke). The following manufacturers are also interested in hearing about illegal copies of their

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Gridrunner
Retro Ball
Synthesound
Turtle Graphics II
Gridrunner
Sham
Cartridge for VIC 20
Cartridge for VIC 20
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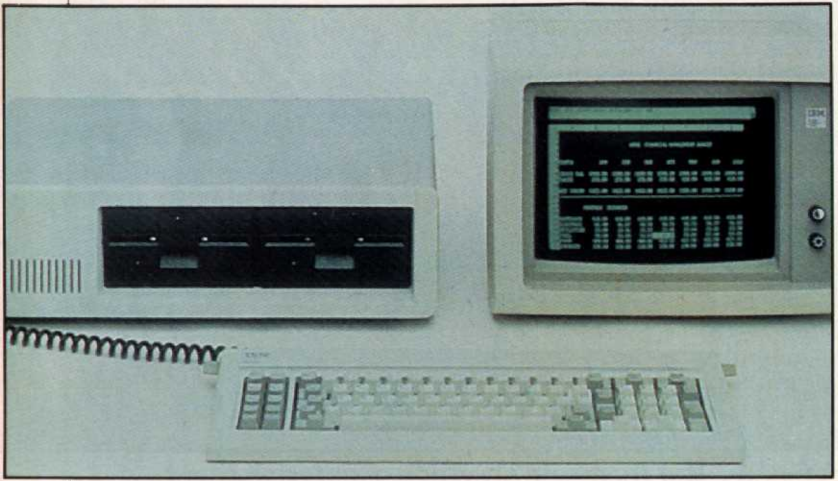
arcade titles: Atari (408-942-3100; Karen Witte), Bally (312-452-5200; Stan Jarocki), Taito (312-981-1000; Paul Moriarity), Sega (619-485-4464; Bob Rosenbaum), Williams (312-267-2240; Ron Crouse), Nintendo (206-882-2040, Frank Ballooz). Be very sure that the game you're reporting is illegal before you call, and don't expect instant action. Researchers estimate that a full 30 percent of all the quarters spent in arcades are collected by illegal coin-ops; nailing them all is a big job.



Help! I just finished reading Dan Azulay's article "Cracking the Code" in your August issue and found it extremely helpful. I have an IBM PC and I want to program in machine language. However, I have not been able to find any info about performing graphics and sound programming on my computer. All the so-called experts tell me it's too difficult to learn at home, but surely there must be at least one book that teaches it like a tutorial without using ASCII characters for graphics and "beep" for sound! And do I really need to get all those technical books and an assembly program?

Robert Becker
Green Bay, WI

Yes, Robert, it *is* possible to learn IBM machine language programming at home—it's just very difficult, because the PC's 8086 instruction code happens to be just about the most complex instruction set around. But if you've got plenty of experience with BASIC programming and are really ready to apply yourself, all you need is the IBM Macro Assembler package and one book: *IBM Assembly Language: A Guide for Programmers* by Leo J. Scanlon (it costs $19.95 and is published by Robert J. Brady Co., Bowie, MD 20715). Scanlon's book is the best IBM machine language tutorial we've seen: well-written, readable and comprehensive.

I currently own an Atari 2600 and am considering purchasing either an Atari 5200 or ColecoVision. I have read that both the 5200 and ColecoVision have adapters that enable users to play 2600-compatible cartridges. It wouldn't seem that there would be much of a market for 2600 adapters among people who already own the 2600 itself. Is there a possibility that, in the future, either ColecoVision or the Atari 5200 will have modules that will make these two advanced systems compatible with each other?

David Adams
Redford, MI

There may not be a huge market for the adapter among those of you who already own a 2600, but those who don't are buying up the ColecoVision Atari module like mad. As far as making modules that will allow ColecoVision to play 5200 games and vice versa, well, there are no plans in either company's books (so far) to manufacturer those. Sorry.

I own an Intellivision, and when I turn it on to play a game there are ghosts and lines through the screen. I've tried switching back and forth between channels three and four, but it only stays clear for a couple of seconds. Is there anything else I can do beside buy a new one? Mine's only two years old and I've never had a problem with it before.

Chad Robbins
Lindsay, OK

Well, we do have a great set of plans for turning that old Intellivision into a fabulous planter.... Seriously, Chad, there's no reason to junk your Intellivision. If your regular TV reception is okay and you don't live under high-tension power lines or near some other obvious source of interference, we'd suggest that you look around the house for a local static source—an air conditioner, power drill, blender or other home appliance that might be in use when you're having trouble playing games. If that doesn't help, your Intellivision may need service. Call 1-800-421-2826, and customer service representative Ed Rodemoyer will give you the name and address of an authorized Mattel service center near your home.

Do you have a question about video games or computers that needs answering? Send your questions to: Electronic Fun, *350 E. 81st St. New York, NY 10028.*

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ARTIFICIAL INTELLIGENCE

Mind out of matter

By Frank Moldstad

Not too many years ago, when the only computers around had names like UNIVAC and needed entire buildings to be housed in, the notion of an intelligent machine that would sit in your living room was strictly the stuff of science fiction. Even some of the experts doubted it would come to pass. Why? Because for all the power of those monster computers, the programmers were completely unsuccessful in getting them to play a decent game of chess.

Now, of course, even a VIC-20 can give an accomplished chess player a run for his or her money, and an even better game can be had against some of the chess machines like Boris, which have been out for a few years. While some computer scientists work on getting more and more memory into less and less space, and others figure out how to wrench more gameplay out of a VCS, there is a small group exploring questions that at this time, have almost nothing to do with computers at all—questions about artificial intelligence.

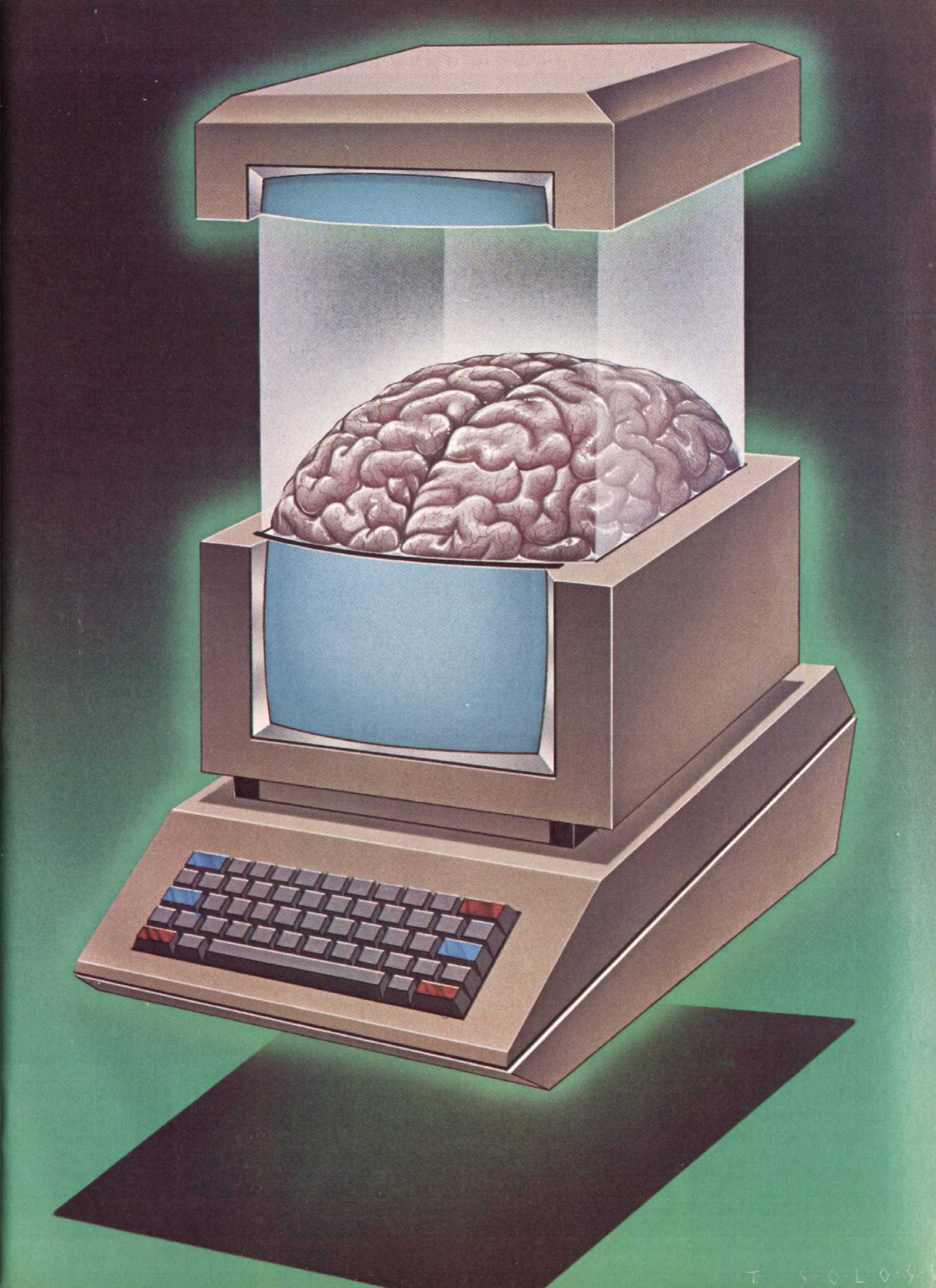
The computer HAL in *2001: A Space Odyssey* is the kind of machine most people think of when they hear the words "artificial intelligence." It's a machine that reasons just like a human being, in HAL's case even to the point of wanting to be the boss because it feels it's smarter than everybody else. In the movie, the scientists who built HAL were completely surprised by his power-hungry streak—but scientists in artificial intelligence (AI) have learned to expect surprises. They discovered years ago that a thinking machine is frequently greater than the sum of its parts.

Thinking machines of the future will be able to reason solutions to problems without having all the facts. They'll be able to learn from experience and engage in conversations with us. They will also develop personalities.

Artificial intelligence is the preserve not simply of computer experts, but of psychologists, mathematicians, linguists and brain surgeons. Even those deeply involved in the research are hard pressed to say exactly what it is they are studying. It's like the olden days, when scientists simply called themselves "philosophers" and studied everything from physics and mathematics to proving the existence of God. Nowadays, advances in AI research affect the treatment of diseases, the defense program and the sorts of products you can buy for your home computer, to name just a few of the more visible areas.

While sci-fi writers have presented

Illustration: Tommy Soloski

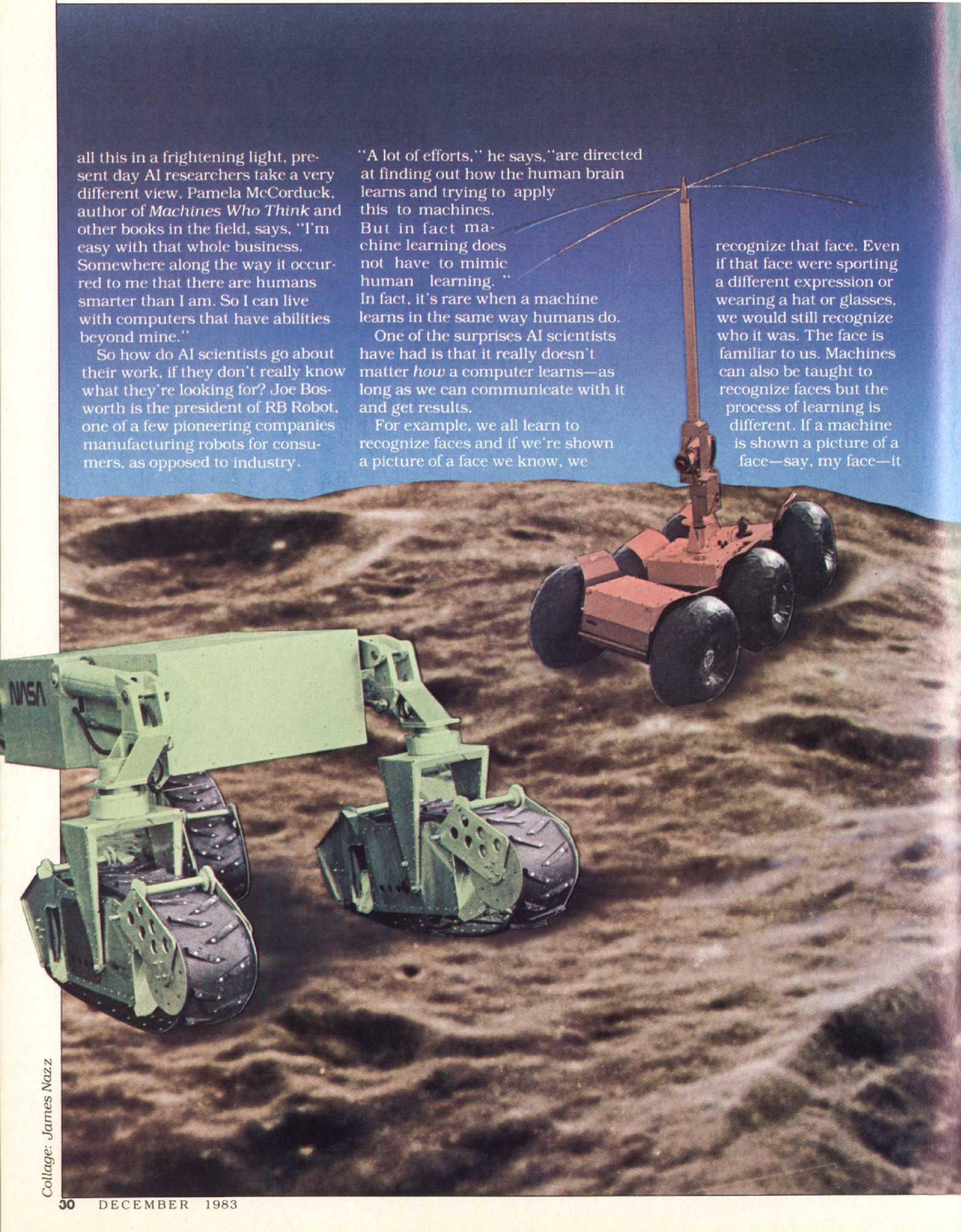

T. SOLOS

all this in a frightening light, present day AI researchers take a very different view. Pamela McCorduck, author of *Machines Who Think* and other books in the field, says, "I'm easy with that whole business. Somewhere along the way it occurred to me that there are humans smarter than I am. So I can live with computers that have abilities beyond mine."

So how do AI scientists go about their work, if they don't really know what they're looking for? Joe Bosworth is the president of RB Robot, one of a few pioneering companies manufacturing robots for consumers, as opposed to industry. "A lot of efforts," he says, "are directed at finding out how the human brain learns and trying to apply this to machines. But in fact machine learning does not have to mimic human learning." In fact, it's rare when a machine learns in the same way humans do.

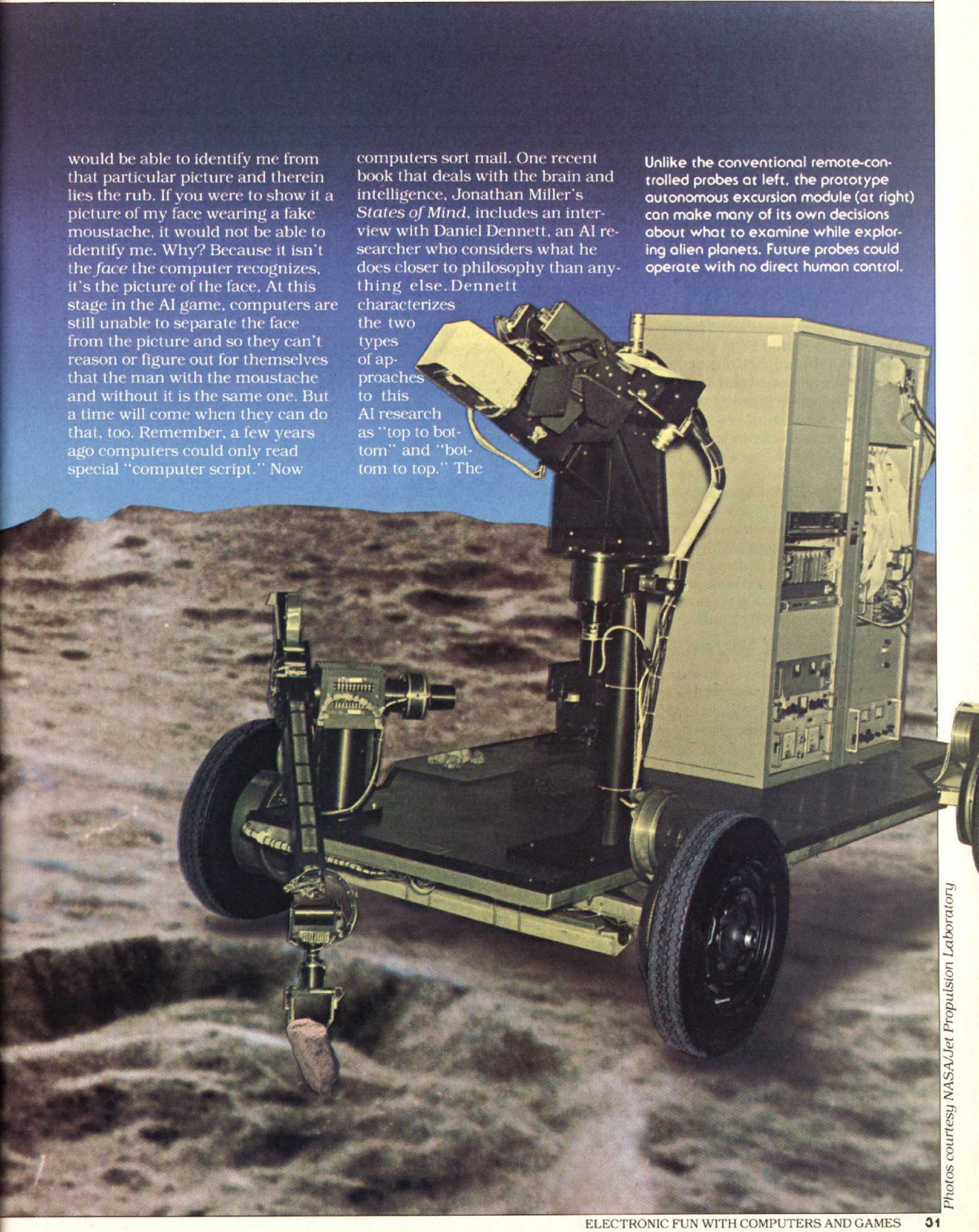
One of the surprises AI scientists have had is that it really doesn't matter *how* a computer learns—as long as we can communicate with it and get results.

For example, we all learn to recognize faces and if we're shown a picture of a face we know, we recognize that face. Even if that face were sporting a different expression or wearing a hat or glasses, we would still recognize who it was. The face is familiar to us. Machines can also be taught to recognize faces but the process of learning is different. If a machine is shown a picture of a face—say, my face—it



Collage: James Nazz

would be able to identify me from that particular picture and therein lies the rub. If you were to show it a picture of my face wearing a fake moustache, it would not be able to identify me. Why? Because it isn't the *face* the computer recognizes, it's the picture of the face. At this stage in the AI game, computers are still unable to separate the face from the picture and so they can't reason or figure out for themselves that the man with the moustache and without it is the same one. But a time will come when they can do that, too. Remember, a few years ago computers could only read special "computer script." Now computers sort mail. One recent book that deals with the brain and intelligence, Jonathan Miller's *States of Mind*, includes an interview with Daniel Dennett, an AI researcher who considers what he does closer to philosophy than anything else. Dennett characterizes the two types of approaches to this AI research as "top to bottom" and "bottom to top." The



Unlike the conventional remote-controlled probes at left, the prototype autonomous excursion module (at right) can make many of its own decisions about what to examine while exploring alien planets. Future probes could operate with no direct human control.

Photos courtesy NASA/Jet Propulsion Laboratory top to bottom approach works like this: We really don't know *how* we think, but we know the sorts of things we do *when* we think. The aim is to get the machine to do those things. Think of Sherlock Holmes, who could deduce a man's life history by studying the ashes from his cigarette. It doesn't matter what parts of his brain he used to perform this feat. Similarly, it doesn't matter what circuits the computer uses to deduce. The important thing would be to get the machine to think like Holmes.

The bottom to top approach says, based on what we know of the brain, we know that it is very similar to a computer in many ways. Messages in the brain are coded into electrical discharges that take place across the synapses—the space between brain cells—just like the on-off positions of the circuits in a computer. By constructing a machine that works like a brain we should be able to build something that does the same thing a brain does—something that thinks.

I've Got A Secret

Which method is better? Dennett answers the question by posing a problem. Suppose you knew that secrets were being leaked to the Russians. Your job—find the spy. How would you go about it? If you were a top to bottom researcher, the first thing you would do is determine *which* secrets were being leaked. If they were secrets about submarines you might begin looking in the Navy, rather than the Air Force. Then you'd try to determine what method was being used to leak the secrets. Carrier pigeons? Coded letters? Telephone calls? Then you'd find out who had access to the secrets, and so on.

The bottom to top researcher, on the other hand, would start by saying, "We know how spies work! Intercept all the carrier pigeons! Open all the mail! Tap all the telephones!" In artificial intelligence or in counter-intelligence, says Dennett, the top to bottom method is more productive. Although there are similarities between the ways brains and computers are *built*, the similarities between what they *do* is more important to AI.

It's often said that one of the biggest problems with AI is that we don't know how *we* think, so how are we going to design machines to do it. This is true, but only the very latest research has been able to tell us just how true. For thousands of years at least, man has asked the question, "Who am I?" Now we wonder whether computers will ask themselves the same question. It certainly seems simple enough, but it's not. If I ask, "Who are you?" you would tell me your name. If I ask *myself*, "Who am I?" I'm not looking for the answer, "I'm Frank." What am I looking for? That's a tough one. And if a computer is ever going to get to the point where it asks, "Who am I?" shouldn't we first know what *we* mean when *we* ask it? And if we haven't figured it out for thousands of years, will we ever know? Surprisingly, we may not need to in order to advance in AI. One answer to these questions, suggested by Dennett in *States of Mind*, could tell us a lot about the future of AI research, and about ourselves.

Artificial intelligence machines, says Dennett, are made up of a lot of very stupid components, which nevertheless do certain tasks very well. Take a computer programmed to play chess, for example. One part of it does nothing but generate moves—it doesn't know what move the opponent has made and it doesn't care. It just suggests moves for the computer. Another part will criticize the move suggestion.

Another part will make sure the move is legal. Another will keep time. Even these parts are made up of smaller parts—the move critic, for example, is made up of a lot of little "file clerks"—its memory.

Nowhere is there a boss for all this activity—there's no component that takes all the information from the others and decides, "This is the move." Perhaps, says Dennett, *our* brains work in the same way. We like to think there's a "boss"—a "self" that finally decides whether we do something. It *feels* like there is, but this feeling may be the result of a brain component *whose only job is to make us feel like there's one "boss" in charge.* When we ask ourselves "Who am I?" there may not really be anyone there to answer.

This is what we meant before when we said that the whole may be greater than the sum of the parts in an artificial intelligence machine. If your brains are capable of creating the illusion that there is one center of consciousness—the "self" we refer to when we say, "I'm talking to myself"—maybe a computer brain would be capable of doing the same for a computer.

There are other possibilities for artificial intelligence that we can only guess at now. Consider the types of input the computer gets. Mightn't what it think be different if it got different sorts of input? For example, computers are very bad at seeing. Nolan Bushnell, who founded Atari and currently runs Androbot, says one of the most difficult tasks for a robot to perform is to pick up a sock off a Persian rug. Nonetheless, he is confident that robots will be able to learn this, once the technology of visual sensors is refined. As computers begin to relate to the world in ways more human, the way they use their artificial intelligence might become more human as well. The key word, though, is "might." The actual results might be something completely different—there's no way to know.

A Matter Of Time

AI scientists agree, however, that before artificially intelligent robots can become reality, real advances will have to be made in their visual understanding and their ability to understand spoken commands. Work in both areas is proceeding, and it's only a matter of time before breakthroughs occur.

There is no true artificial intelligence device available for our homes yet, but one computer software company in Connecticut, CompuTeach, is applying some of the results from AI research about how we learn to teaching children. The company was founded by Roger Schank, an early researcher in learning processes that were applied to artificial intelligence. Schank helped develop what is

Continued on page 103

They may look like airport-lounge couches, but the Cray - 1 series (this and previous page) can process billions of bits of information per second. The program CRAY BLITZ, also plays a mean game of chess.

Photos courtesy Cray Research, Inc.

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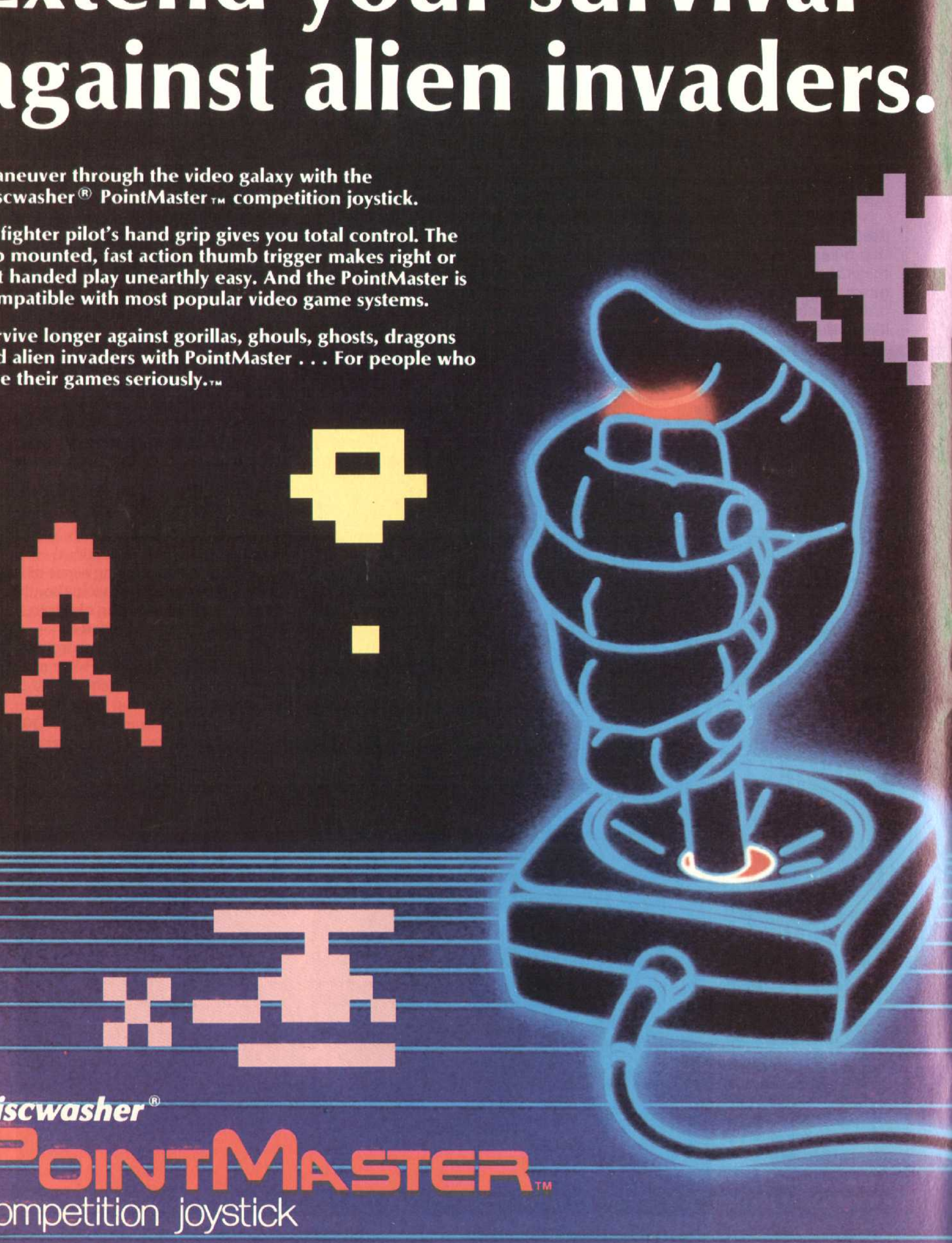

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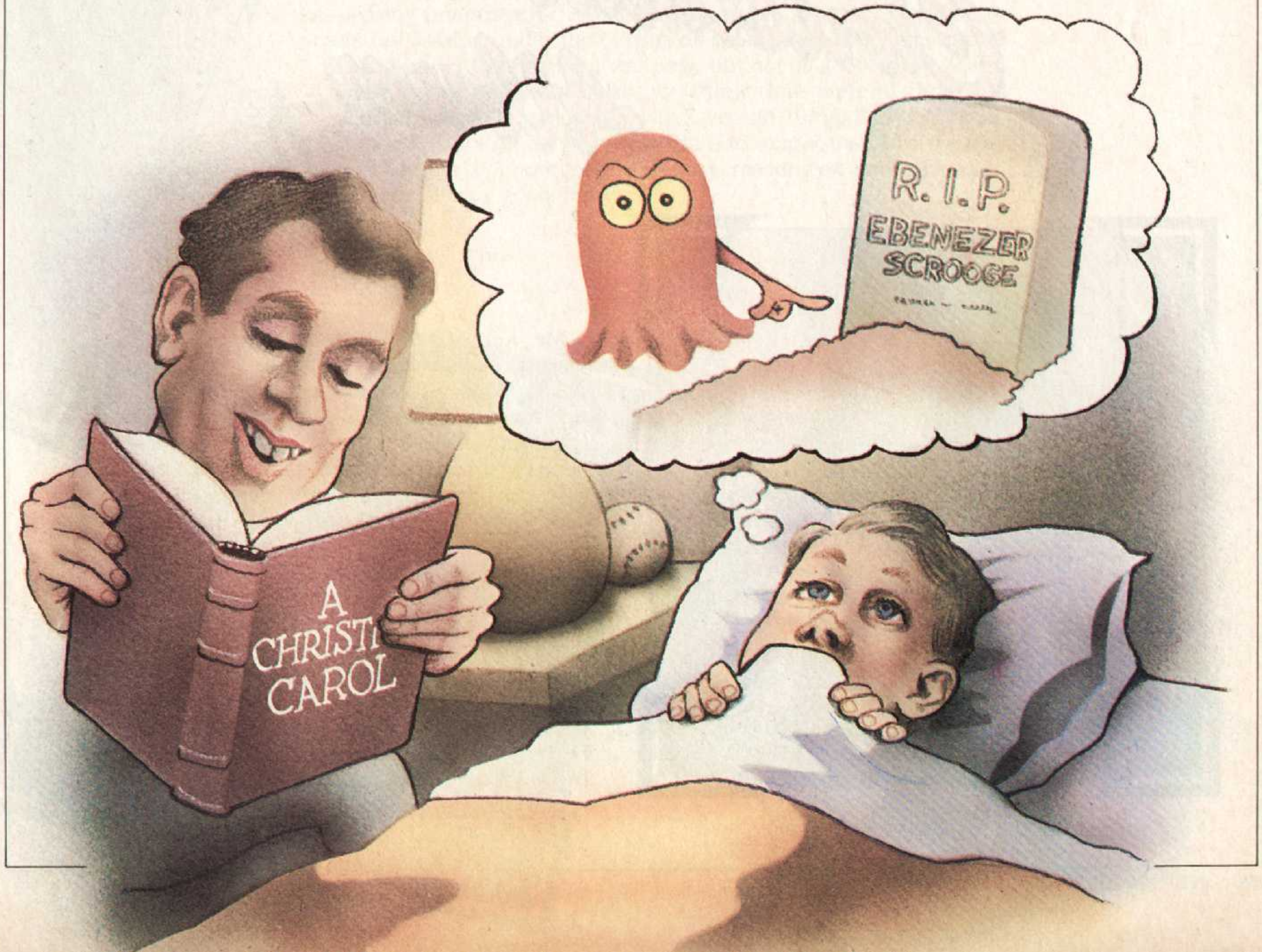
OFF THE BEATEN TRAKBALL

A new-fangled CHRISTMAS

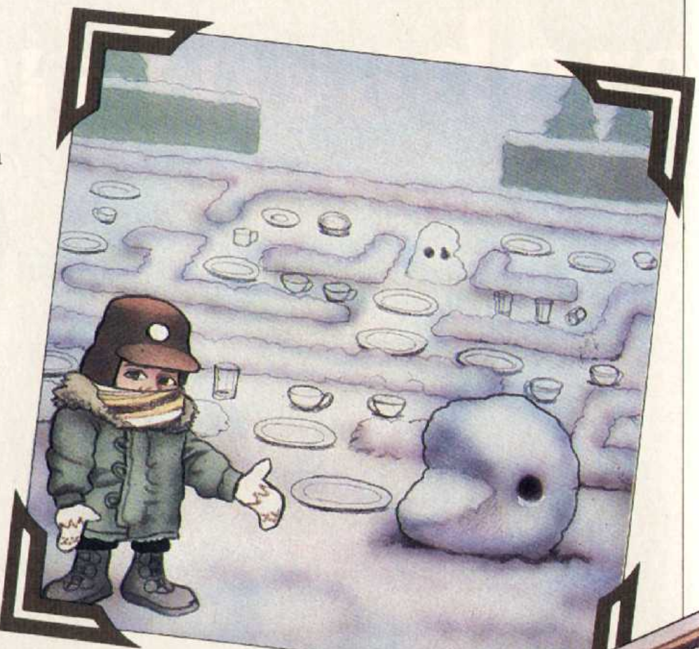
Merry Christmas to all and to all a good byte...

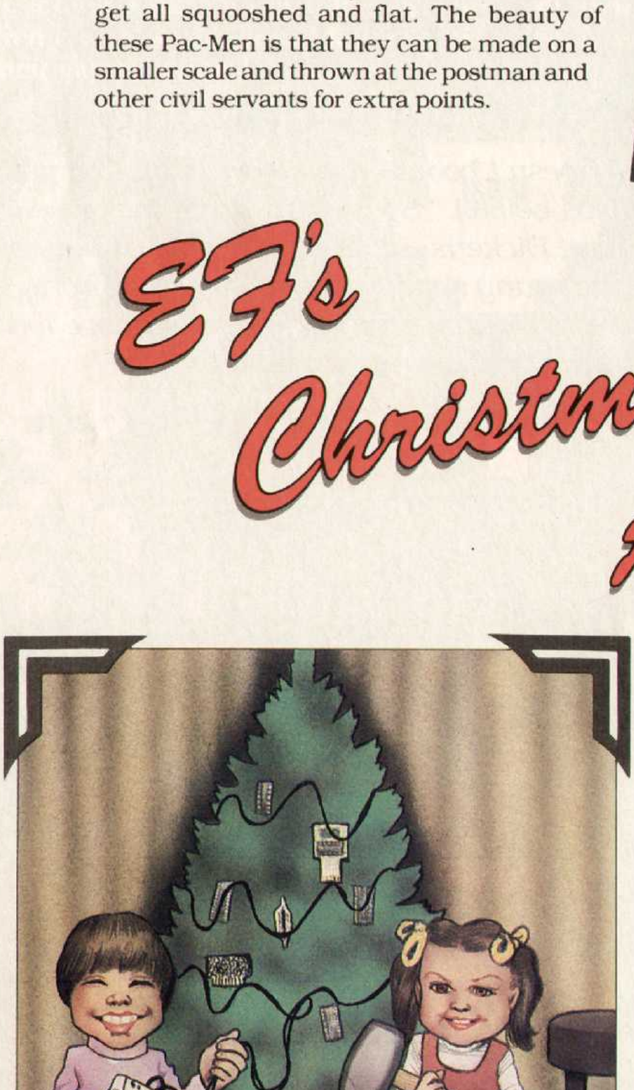
"A Christmas Carol *may be literature but it doesn't boot, if you get my drift,"* writes *J. Adrian Fox of Anytown, New Mexico (pictured below). "So we substitute the Ghost of Clyde yet to come when we read it. It's not what Dickens wrote but, hey, what did he know about computers?" This is just one of the many suggestions we received from readers on how to bring the Computer Age to Christmas. After all, we must move forward. We must be current. We must be high tech and we must read on.*



EF's Christmas Album

Mr. and Mrs. James Wolcott of Ennui, Michigan write: Snowmen, who needs 'em? Our little son, Jimmy Jr. has just reached the Computer Age. He made a snow Pac-Man in our front yard and a giant maze to go with it. All you have to do is roll the snow up into a big ball and cut out a wedge. This is the mouth. The dots in this photograph are represented by my mother's finest heirloom china but paper plates will do. Don't use a carrot for the nose. Also, don't try to roll him around the maze as if you do, his mouth will get all squooshed and flat. The beauty of these Pac-Men is that they can be made on a smaller scale and thrown at the postman and other civil servants for extra points.

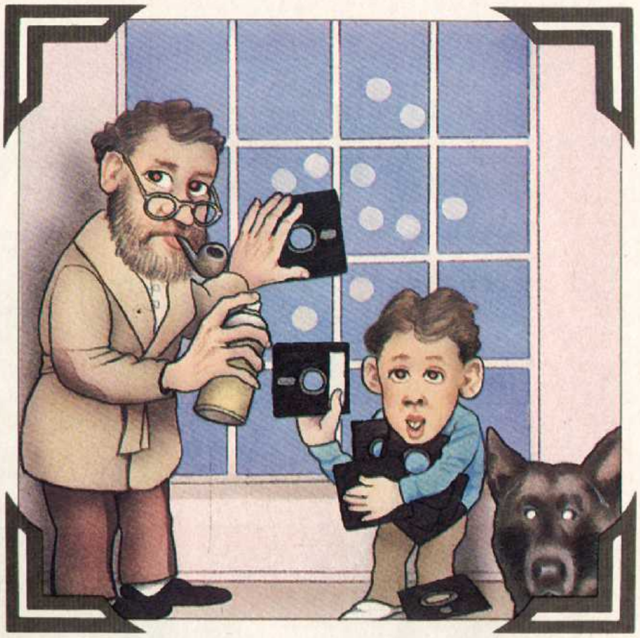




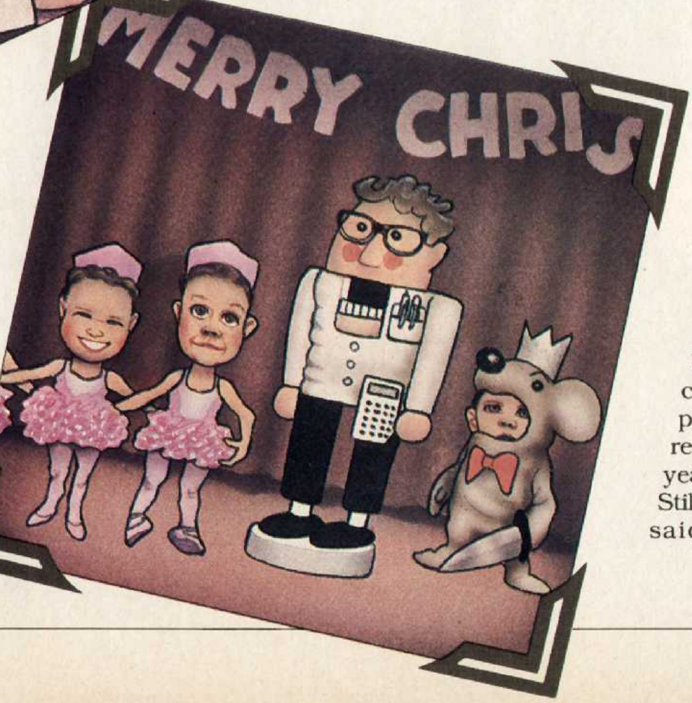
Mr. and Mrs. Philip Finger of Bedsprings, Iowa write: You'll never guess what's inside your home computer. Give up? A whole department store full of dandy Christmas tree ornaments. Simply break open the protective plastic casing and look inside. See all those little shiny things and colored wires? All you have to do is tip them out, attach a string to them and tie them onto the tree. In addition, that tape stuff inside those plastic cassette cases can be pulled right out very easily and thrown here and there on the branches creating a very pleasing effect. And by hooking your tree to a modem, you can access the central Christmas tree in Rockefeller Center. Amazing really. Afterwards, however, your computer will work differently than it did before.

ATARI
MISSILE COMMAND

Professor Jan Verbeeck of Tentative, Ohio writes: We like stencils. We found a way to cut out all that tedious cutting out of little shapes. You've got a perfectly fine little shape already cut out in your floppy disks. Just hold the disk up to the window and spray that fake snow right at the hole and you can cover your windowpanes with little circles in no time. Folding the disks will give you half circles and putting your finger in the way creates some really abstract shapes. In addition to being pretty, it's also educational, teaching children and passersby about the circular aspect of time, life and other really profound things.



Mr. and Mrs. Rocco Calamare of Brooklyn, New York write: We like to kiss. Hey, we're newlyweds, okay? Anyway, our favorite part of Christmas is doorways. Know why? Mistletoe. You get to kiss under it. This year, instead of hanging up mistletoe, we hung up *Missile Command*. That's us—kissing underneath the *Missile Command*, get it? We tried other carts but kissing under the *Centipede* wasn't romantic, you know? Kissing under the *Freeway* was okay but not as good as the boardwalk at Coney Island. Also, we think that some of those old Christmas carols are just not with it. I mean, things like "figgy pudding?" Come on. So we rewrote that old song so instead of the way it used to be it now goes "Chestnuts roasting on continuous fire, etc." Pretty good, huh?



Miss Alice Young of Apathy, South Carolina writes: My third grade class rewrote the Nutcracker and called it the Numbercruncher Ballet. In it a little girl is given a computer nerd for Christmas and everyone dances around it until its glasses break. The mouse (portrayed by Timmy Vanderbilt) was representational as our costumer was unable to fit him with little ball bearings. He is, despite this, totally compatible with 90 per cent of all home computers. Unfortunately, we had nothing that resembled a microprocessor so we used last year's sugarplum fairy costumes instead. Still, it went over quite well and the local paper said it was (and I quote) "good."

Illustrations: Michael Okamoto

NOW YOU SEE IT...

NOW YOU DON'T

Where did all those new products go?

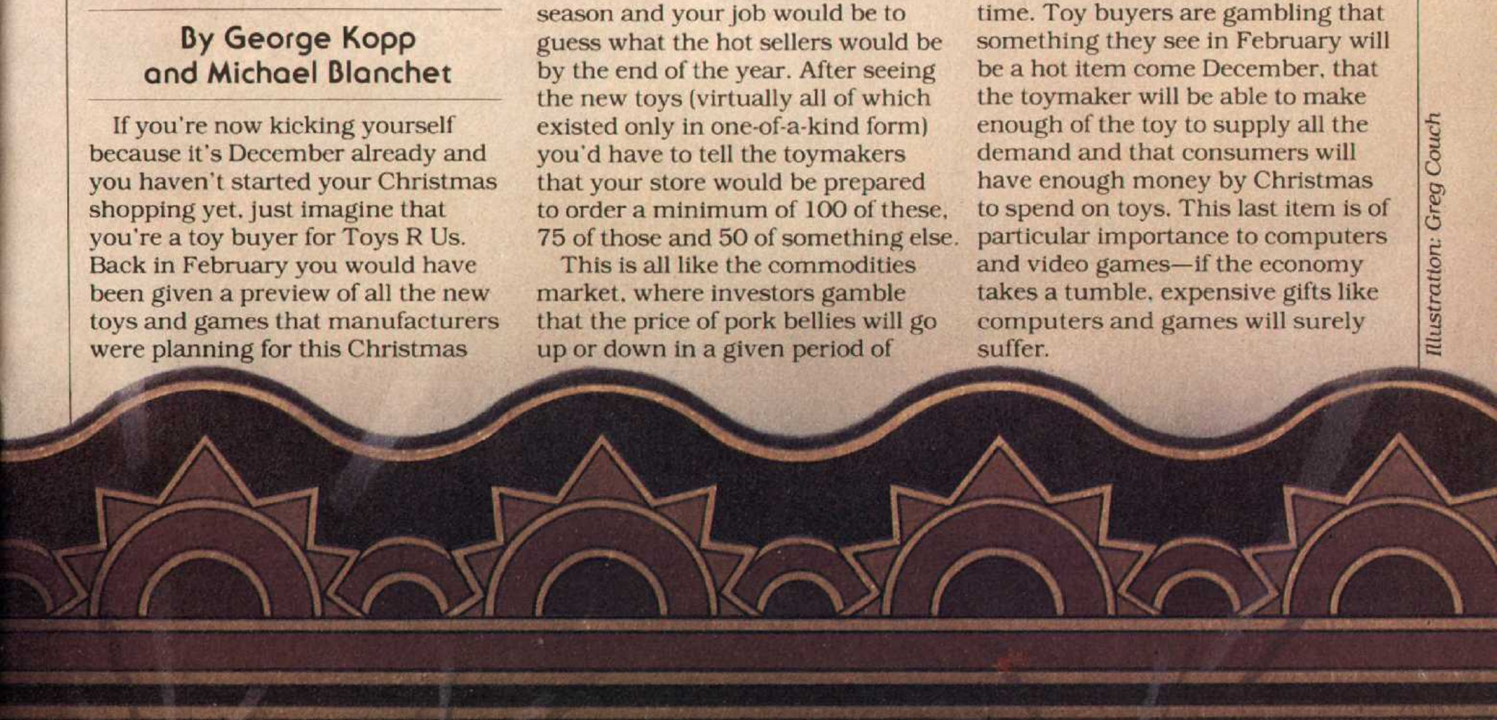
You've heard about them. You've been saving money for them. Suddenly . . . they're gone. There are several reasons for this, and it all goes to prove that there's a lot more to bringing out a new product than just waving a magic wand. Between the time someone thinks up the idea and the time it's supposed to be in the store, it may not look like such a good idea after all.

By George Kopp and Michael Blanchet

If you're now kicking yourself because it's December already and you haven't started your Christmas shopping yet, just imagine that you're a toy buyer for Toys R Us. Back in February you would have been given a preview of all the new toys and games that manufacturers were planning for this Christmas season and your job would be to guess what the hot sellers would be by the end of the year. After seeing the new toys (virtually all of which existed only in one-of-a-kind form) you'd have to tell the toymakers that your store would be prepared to order a minimum of 100 of these, 75 of those and 50 of something else.

This is all like the commodities market, where investors gamble that the price of pork bellies will go up or down in a given period of time. Toy buyers are gambling that something they see in February will be a hot item come December, that the toymaker will be able to make enough of the toy to supply all the demand and that consumers will have enough money by Christmas to spend on toys. This last item is of particular importance to computers and video games—if the economy takes a tumble, expensive gifts like computers and games will surely suffer.

Illustration: Greg Couch



The place where the manufacturers give the toy buyers (and the press) a Cook's tour is the Toy Fair in New York City. The Toy Fair is held in the Toy Building, a venerable old office building in downtown Manhattan. Here toy companies remake their offices into showrooms for two weeks and entertain a relentless stream of visitors. They employ fairly elaborate security measures to keep out competitors, too—if you work for Atari there's no way you'll get in to see what Coleco is showing.

Hula Hoopla

The Toy Fair is accompanied by all the hoopla usually associated with a big convention. Last February, for example, Jamie Farr—Corporal Klinger of *M*A*S*H*—was on hand to introduce Fox's *M*A*S*H* game at a lavish party. Manufacturers assure everyone in sight that their new products are the greatest things the world has ever seen. Almost as a reminder that huge success can come in the most unlikely form, the first thing one saw on entering last year's Toy Fair were a couple of models happily Hula Hooping in a showroom window.

Soon after the excitement dies down, though, the hard work begins. Buyers who nodded appreciatively and made copious notes during the event start calling in to say, sorry, we think your game's a dud. Sometimes manufacturers are caught off guard by a runaway success—a product they didn't expect to catch on turns out to be the hit of the show and they have to figure out how to produce enough to satisfy all the orders.

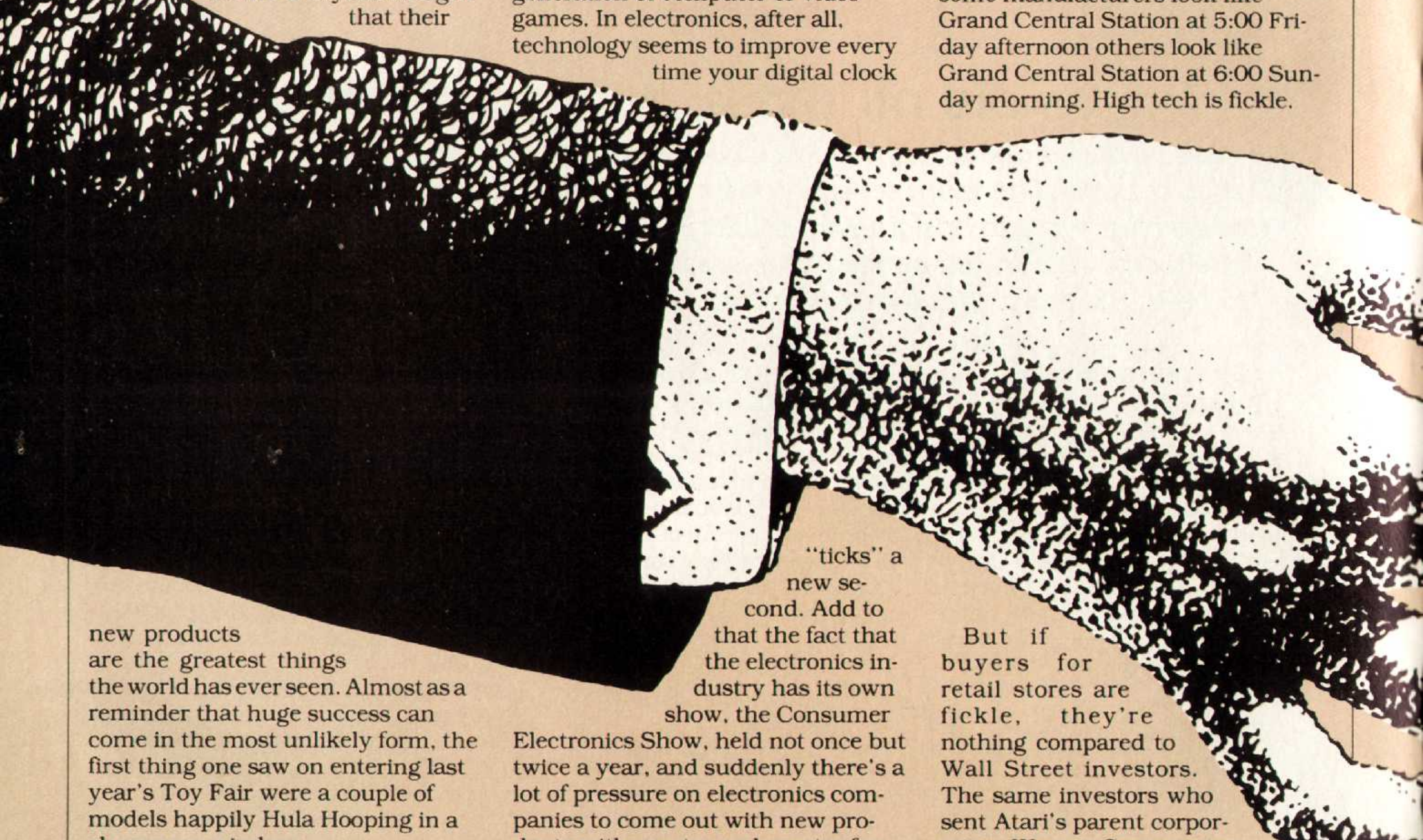
And what of the public? Usually they're completely unaware of all that goes on behind the scenes. The first they see of the new toys is in the Christmas catalogs or the Saturday morning TV commercials in the fall. By that time, everything is set to bring a new toy or game to market.

That's the way it was, at least, until the fastest-growing part of the toy business became electronic. Suddenly a year seemed like a very long time before bringing out a new generation of computer or video games. In electronics, after all, technology seems to improve every time your digital clock "ticks" a new second. Add to that the fact that the electronics industry has its own show, the Consumer Electronics Show, held not once but twice a year, and suddenly there's a lot of pressure on electronics companies to come out with new products with greater and greater frequency.

The Toy Fair attracts little attention outside the toy industry. The Consumer Electronics Show, on the other hand, is watched very closely. If high tech is going to be the future industrial base of the United States, CES (as the show is known in the trade) is one of the most reliable barometers of the industry's health. It was at CES last June that the world got its first look at Coleco's Adam, and the world responded by sending Coleco's stock on another rocket ride to the moon.

Despite its circus atmosphere (the show is attended by over 60,000 people and there is a non-stop round of press conferences, parties and general politicking) the main order of business at CES is the same as at the Toy Fair—writing orders for future delivery. Unlike Toy Fair, though, CES lasts only four days, and by Day Two it's obvious who's got the winners and who hasn't. While the booths of some manufacturers look like Grand Central Station at 5:00 Friday afternoon others look like Grand Central Station at 6:00 Sunday morning. High tech is fickle.

But if buyers for retail stores are fickle, they're nothing compared to Wall Street investors. The same investors who sent Atari's parent corporation, Warner Communications, into the stratosphere in 1982 sent it down the Mohole by

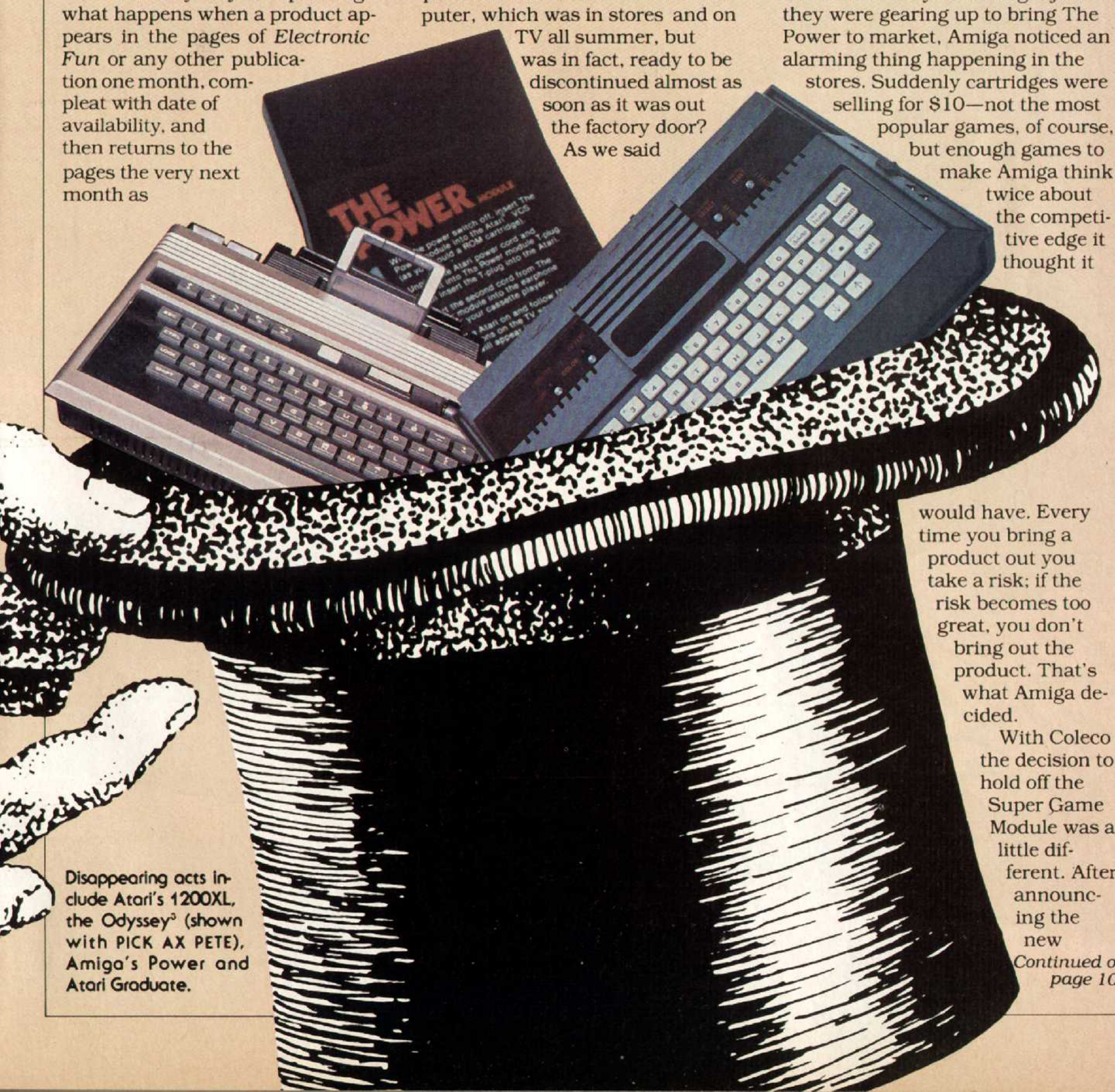


December, in spite of the fact that Atari had made huge profits. The trouble was, the profits were supposed to have been huger. This "volatility," as the business pages like to call it, makes life miserable for everyone who earns a living in the computer and game business. And when life gets miserable in the boardrooms, a common response is to take more chances, hoping for that miracle combination of the right product at the right price which will turn a turkey into an eagle.

All this is by way of explaining what happens when a product appears in the pages of *Electronic Fun* or any other publication one month, compleat with date of availability, and then returns to the pages the very next month as a product-you'll-never-see. There have been more of those this year than we would care to remember. The Coleco Super Game Module (which Coleco now insists you *will* see, but not until next year), Atari's The Graduate computer and Mattel's Intellivision III are three of the most outstanding examples of no-shows, and there are others. Remember all those movie games, like *9 to 5*, *Airplane* and *Butch Cassidy and the Sundance Kid*? Remember Odyssey^3? Remember Amiga's The Power VCS add-on? Then what about products like Atari's 1200XL computer, which was in stores and on TV all summer, but was in fact, ready to be discontinued almost as soon as it was out the factory door? As we said before, this business is a gamble, but it's not just the turn of a card or the spin of a wheel that's going to make the difference of win or lose. In this casino, what somebody does at the next table could affect the way you play your hand. Consider Amiga's The Power. One of the big plusses that system had going for it was that, as with the Supercharger from Starpath, games could be sold on cassette rather than cartridge. This could save companies a lot of money and allow them to sell games for $10 instead of $30. Sometime this year, though, just as they were gearing up to bring The Power to market, Amiga noticed an alarming thing happening in the stores. Suddenly cartridges were selling for $10—not the most popular games, of course, but enough games to make Amiga think twice about the competitive edge it thought it would have. Every time you bring a product out you take a risk; if the risk becomes too great, you don't bring out the product. That's what Amiga decided.

With Coleco the decision to hold off the Super Game Module was a little different. After announcing the new

Continued on page 100



Disappearing acts include Atari's 1200XL, the Odyssey^3 (shown with PICK AX PETE), Amiga's Power and Atari Graduate.

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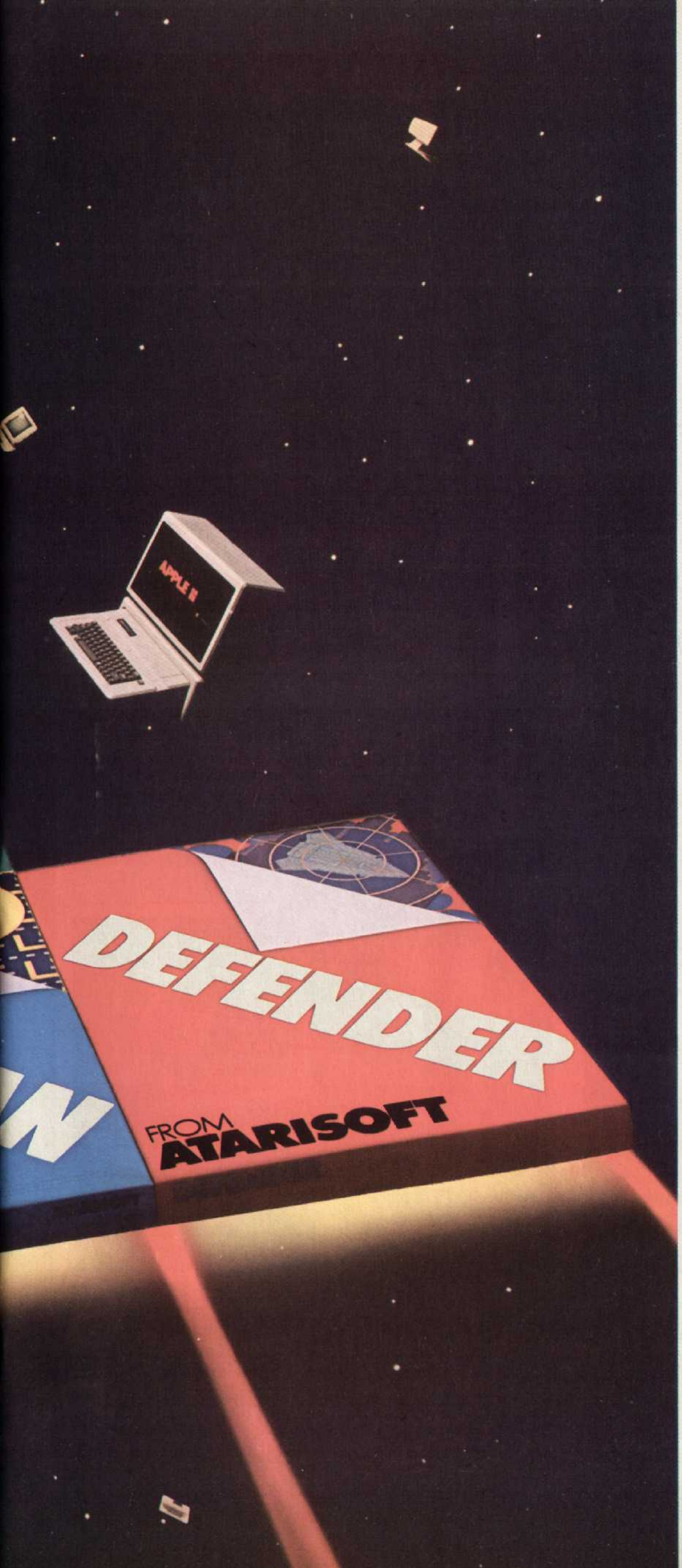
FROM ATARISOFT
PAC-MAN
DONKEY KONG
BY NINTENDO*
ARISOFT
CENTIPEDE
FROM ATARISOFT



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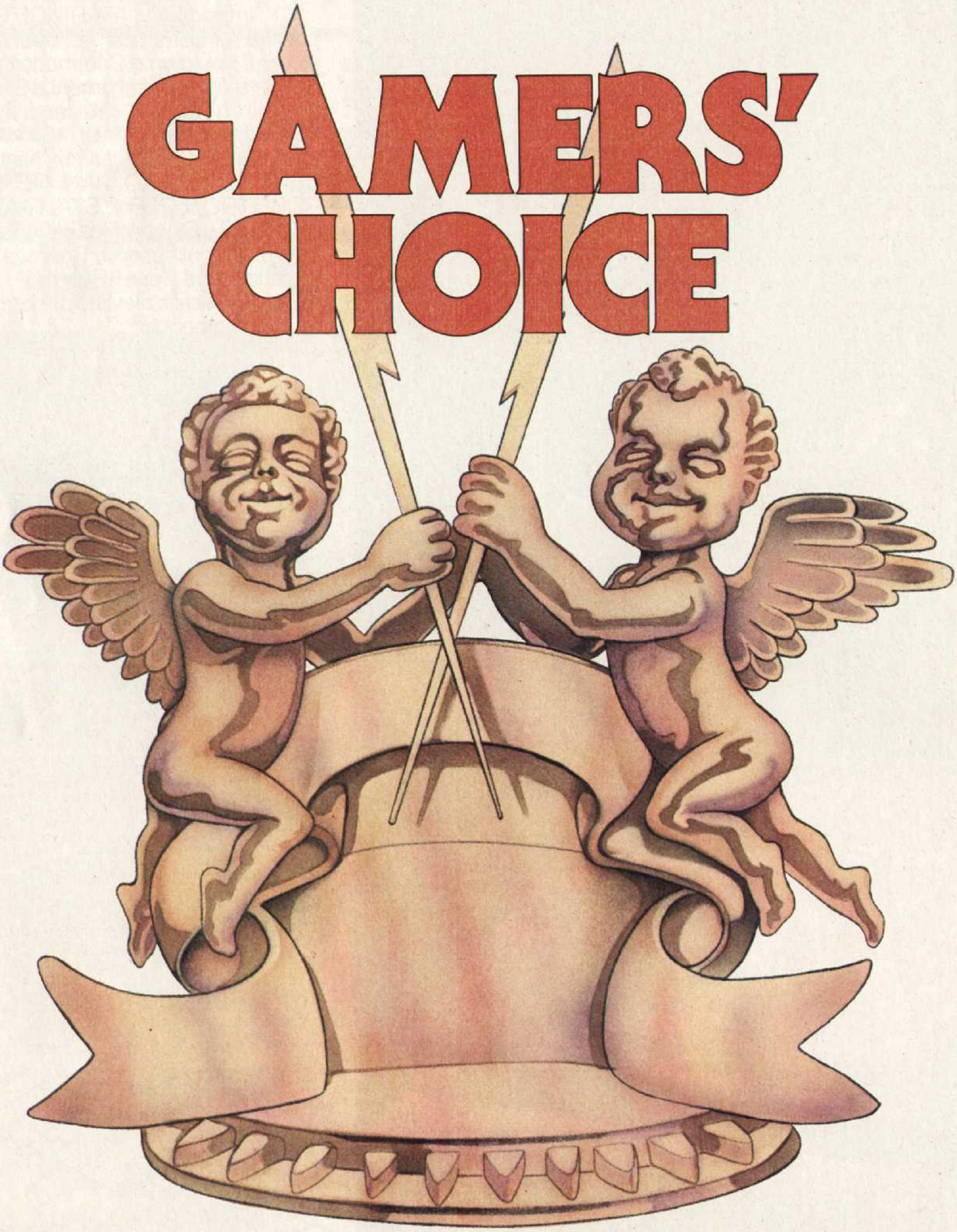
ASM 26

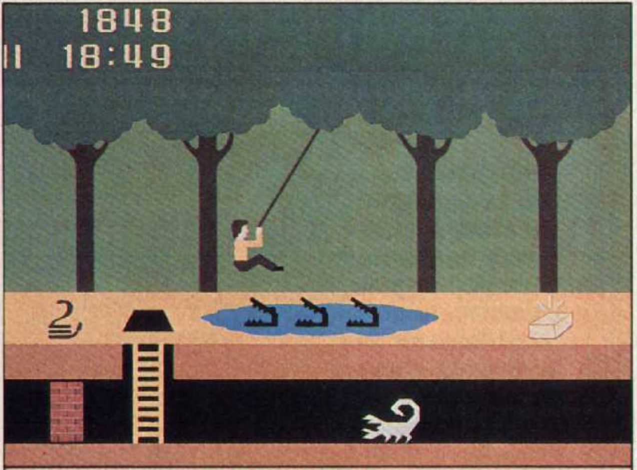
GAMERS' CHOICE



Welcome to the Video Game Hall Of Fun

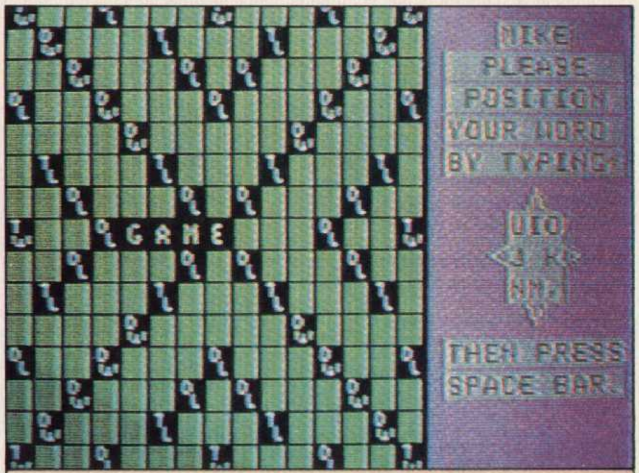
Last summer we asked our readers to pick their favorite video and computer games of 1983, and the results are in. The "Effie" awards (shown above) were given at a ceremony last month. We gave our own "Editor's Choice" awards as well. The descriptive quotes were taken from our own Hits & Missiles *section.*

EDITOR'S CHOICE



VIDEO GAME

PITFALL!/Activision
We're just wild about Harry. Pitfall Harry that is. And we're not alone. The whole country is wild about *Pitfall!* as evidenced by the incredible fact that it was on the best seller charts for practically *all* of this year. That sort of staying power deserves an award. No sooner said than done. Congratulations, Activision.

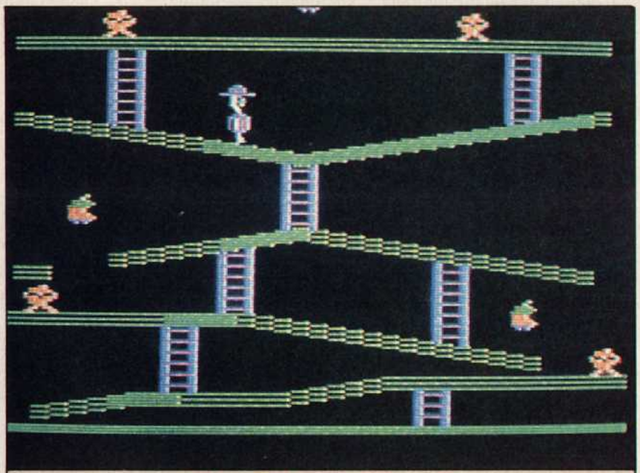


MIKE
PLEASE
POSITION
YOUR WORD
BY TYPING:
UIO
J K
NM
THEN PRESS
SPACE BAR

COMPUTER GAME

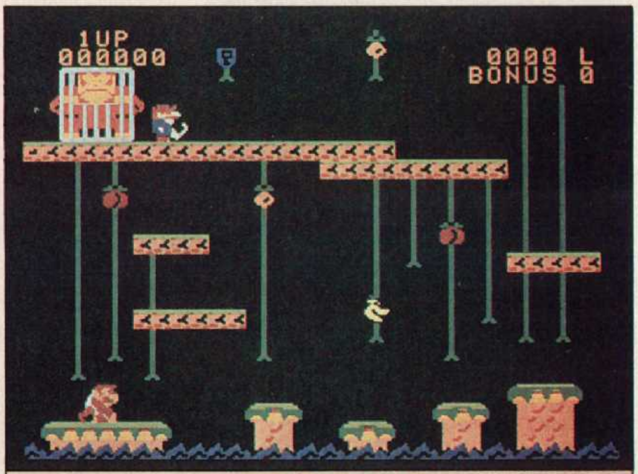
MONTY PLAYS SCRABBLE/Ritam
Scrabble fans who have yet to meet *Monty* are in for a treat. He's one of the best Scrabble players we've encountered. We play *Monty* long into the night after everyone has gone home and only the cleaning crew is here puzzling over our hours. Congratulations, Ritam. Monty is awesome (all seven letters so that's 50 extra points!)

MOST FUN



COMPUTER GAME

MINER 2049er/Microfun
It's a tough way to make a living especially when you have no union to fall back on, but Bounty Bob goes cheerfully about his task, eliminating mutants and filling in thrice-divided levels with no complaints. And all the time wearing that 1920's Boy Scout hat. Congratulations, Microfun!



VIDEO GAME

DONKEY KONG, JR./Coleco
Oddly enough, our readers' hearts do not belong to daddy but to baby Kong. The feisty young anthropoid who has to overcome all sorts of obstacles and get the key to his father's freedom (there's something Freudian here—I just know it) has gained the undying affection of the readers of *EF*. Congratulations, Coleco.

Hall of Fun

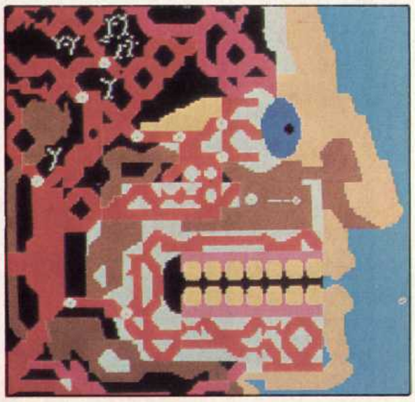
VIDEO GA

MOST ORIGINAL

MICRO SURGEON
Imagic

"There is a final stroke of ingenuity at the end of the game, when you are presented with the patient's bill. The higher the bill, the better surgeon you've been."

TIED

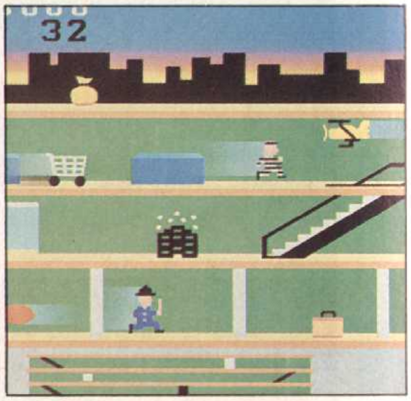


MOST ORIGINAL

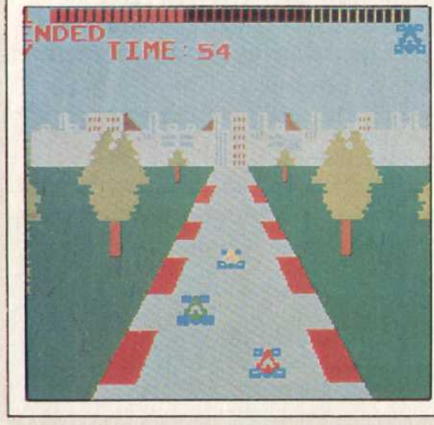
KEYSTONE KAPERS
Activision

"*Kapers* is not a pattern game since the crook possesses a sixth sense regarding your whereabouts. It's a super idea for the sole reason that it guarantees no two games will be identical."

TIED



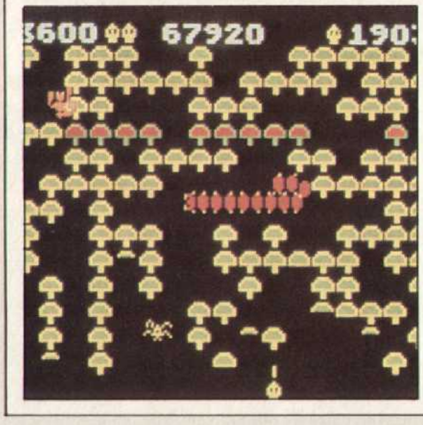
BEST DRIVING



TURBO
Coleco

"*Turbo* is terrific. The deeper you get into this game, the more there is to see."

BEST SHOOT-EM-UP



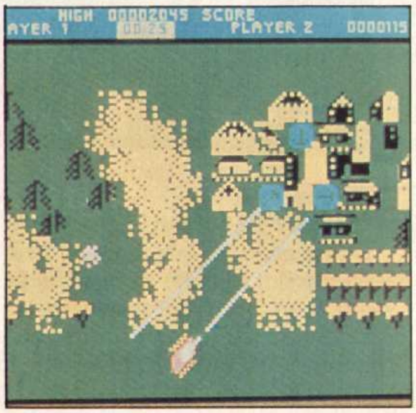
CENTIPEDE
Atari

"At each successive level the action gets faster and faster until you are practically blinded by the blur of movement."

BEST STRATEGY

COUNTERMEASURE
Atari

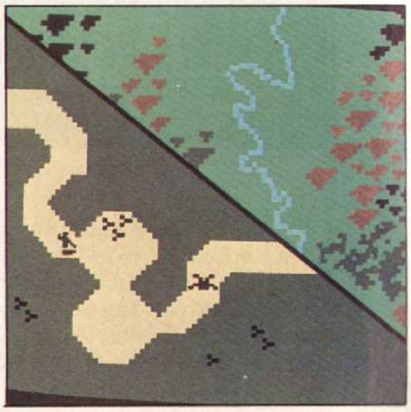
"*Countermeasure* is a shoot-em-up combined with strategy, with graphics and sound effects that are nothing short of brilliant."



BEST ADVENTURE

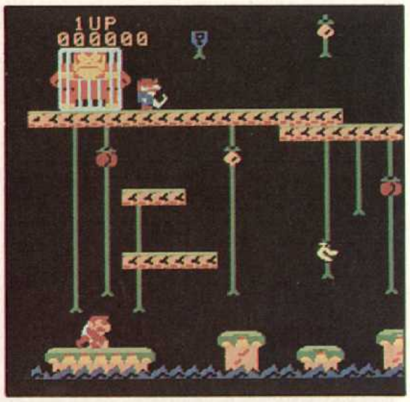
ADVANCED DUNGEONS AND DRAGONS
Mattel

"A timid explorer can creep along slowly or bolt into darkness in blind panic. The dragons look like Godzilla. The demons dance around like Nijinsky in Hell."



E VICTORS

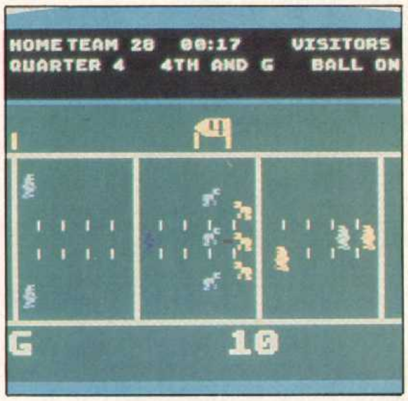
BEST CLIMBING



DONKEY KONG, JR.
Coleco

"You climb up almost exact replicas of the vines and chains found in the arcade parent and you must avoid the same enemies from snapjaws to birds."

BEST SPORTS



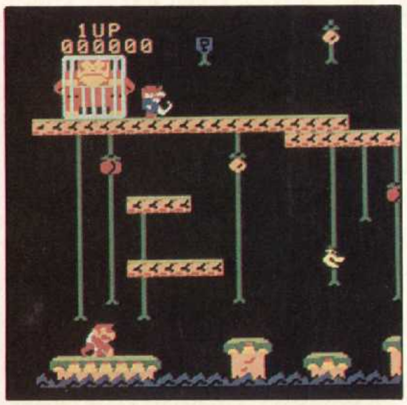
5200 FOOTBALL
Atari

"The sound effects in this Atari game are of superior quality. The crowd cheers you on and you can hear your team running down the field."

BEST ARCADE TO HOME

DONKEY KONG, JR.
Coleco

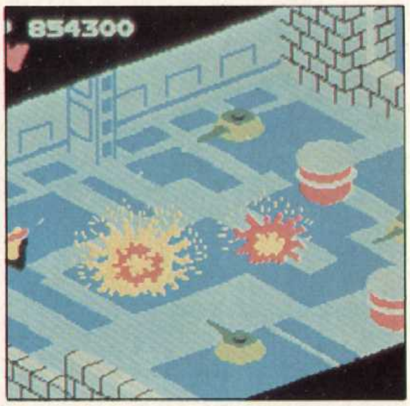
"It will be an instant best seller and stay one. Its graphics, playability and sound are as good as the arcade game."



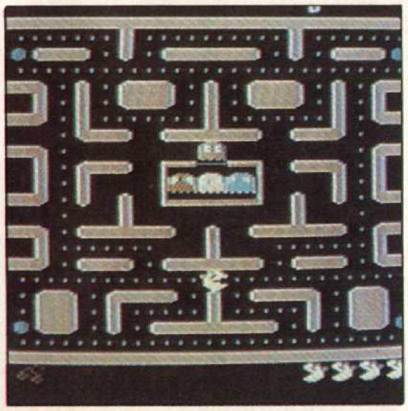
BEST GRAPHICS

ZAXXON
Coleco

"The graphics in *Zaxxon* are stupendous. All the characters are highly detailed and the outlines are crisp and well-defined."



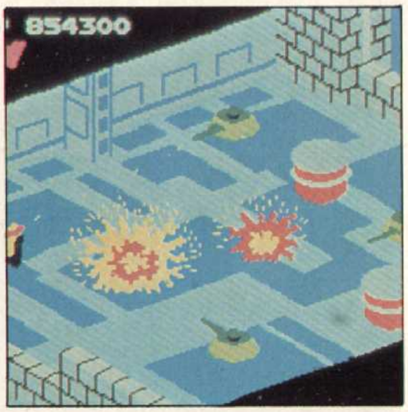
BEST MAZE



MS. PAC-MAN
Atari

"It's the supreme test of one's ability to scramble and improvise under attack. A solid buy, for sure."

BEST ACTION



ZAXXON
Coleco

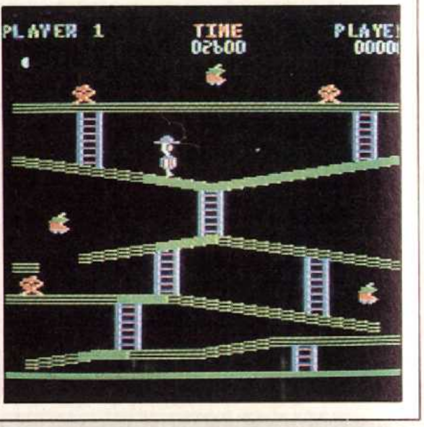
"Your ship moves in a way that really creates the feeling of flight which is a great accomplishment in a third person game."

COMPUTER

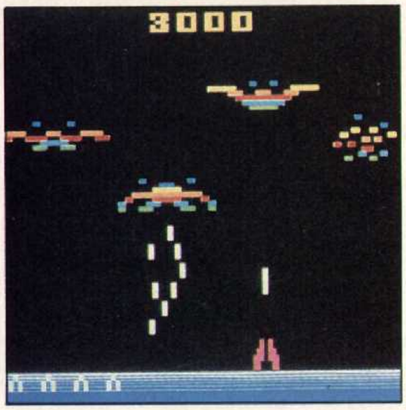
BEST ARCADE ACTION

MINER 2049er
Microfun

"*Miner 2049er* has already become something of a cult computer game and it's easy to see why. Bounty Bob is the major miner of this or any other season."



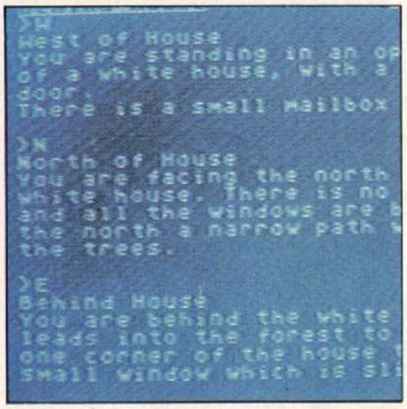
BEST ARCADE ACTION



DEMON ATTACK
Imagic

"Not since Hitchcock's *The Birds* has anything inspired such a fear of winged creatures as *Demon Attack*."

BEST TEXT ADVENTURE



```
>W
West of House
You are standing in an op
of a white house, with a
door.
There is a small mailbox

>N
North of House
You are facing the north
white house. There is no
and all the windows are
the north a narrow path
the trees.

>E
Behind House
You are behind the white
leads into the forest to
one corner of the house
small window which is sl
```

ZORK I, II, III
Infocom

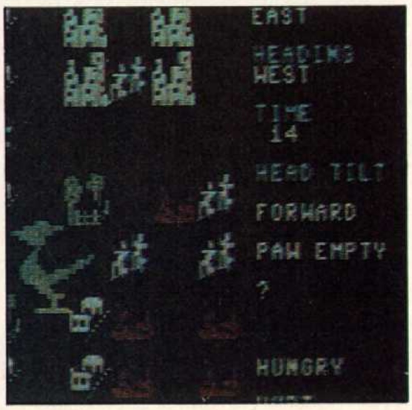
"The *Zorks* have absolutely no graphics but they read like good pulp fiction paperbacks with some fascinating riddles thrown in."

MOST ORIGINAL

CRUSH, CRUMBLE AND CHOMP
Epyx

"Destroy the monsters! Destroy the monsters! That's all you ever get from most games. It's refreshing to be the monster yourself!"

TIED

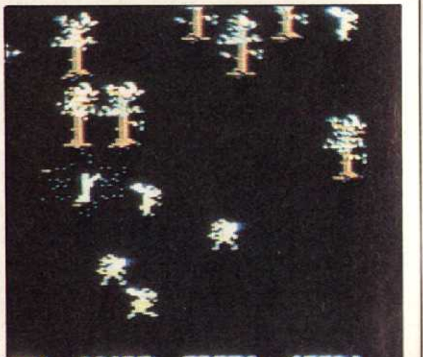


MOST ORIGINAL

NECROMANCER
Synapse

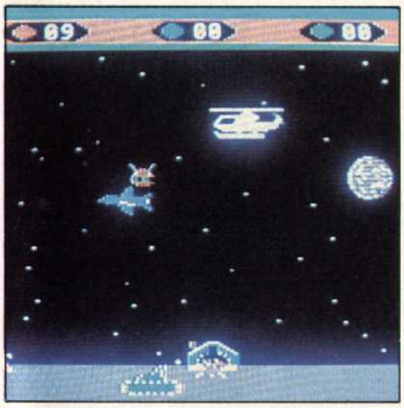
"This enchantingly original game lets you weave perfectly respectable spells without having to handle bats' wings, eyes of newts or anything really repulsive."

TIED



CHAMPIONS

BEST ARCADE ACTION



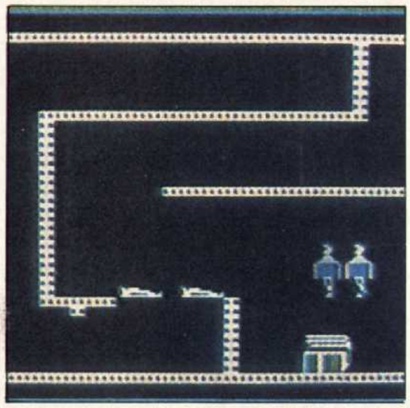
CHOPLIFTER
Broderbund

"The game is incredibly well-made. The helicopter handles like an actual helicopter and you can actually crash if you land too hard."

BEST STRATEGY/SIMULATION

CASTLE WOLFENSTEIN
Muse

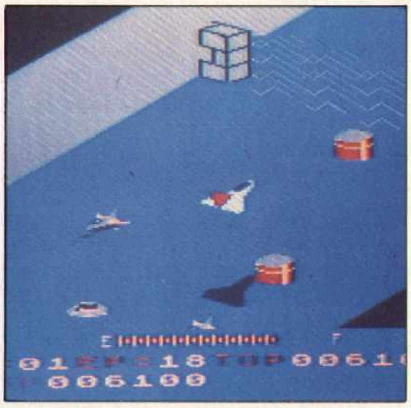
"Unlike other games of this type, the castle changes every time you play and a new layout can even be created during any game."



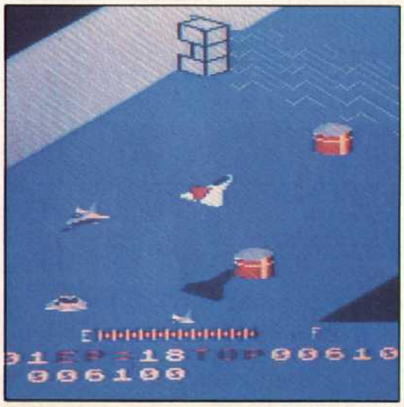
BEST ARCADE TO HOME

ZAXXON
Datasoft

"*Zaxxon* has been brought home in many versions but none can hold a candle to Datasoft's *Zaxxon*."



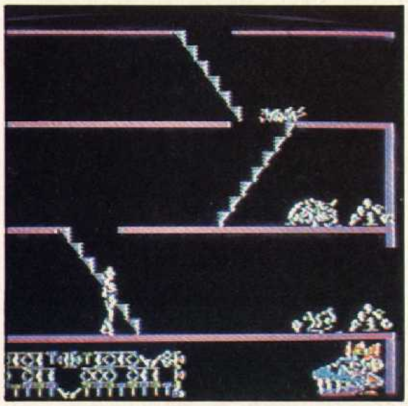
BEST GRAPHICS



ZAXXON
Datasoft

"All the little touches that players love so much are here from the opening demo right down to the artwork on the floor of the fortress."

BEST ACTION ADVENTURE



AZTEC
Datamost

"Aztec demonstrates that the great adventure is a viable topic for a game and one that can captivate both mind and eye."

Joust one of those things

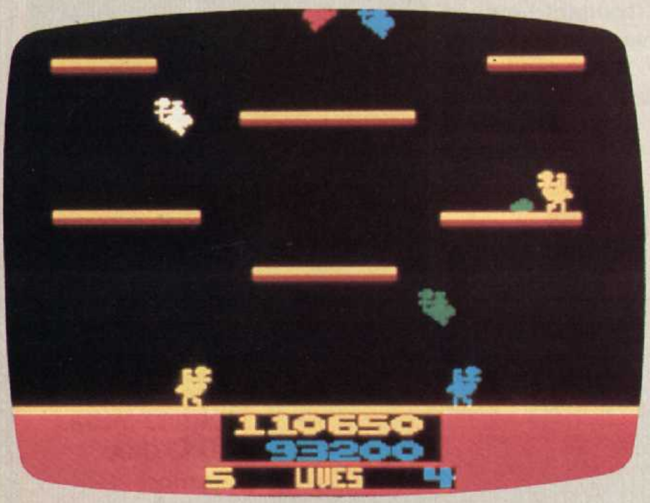
JOUST 🕹🕹🕹/

Atari/Atari VCS

By Michael Blanchet

Although quirks and concessions abound in this Atari home version of *Joust*, it stands, nonetheless, as one of the best coin-op to cart translations in recent memory. In *Joust*, the player does battle atop a most unlikely conveyance—an ostrich. The rules are simple and the fundamentals of play are a cinch to learn. The idea in each round is to crash head to head with the opposing mounts. High lance wins.

The player's ostrich, unlike its real life counterpart, flies by flapping its wings. This function is controlled by the action switch/fire button on the joystick. For each tap you get one flap. Turns are executed, either left or right, by moving the joystick in the appropriate direction. You can choose to play either against the computer, or for more fun, against a friend.



The playfield consists of a series of ledges (seven in all) which effectively divide the screen into thirds. Each bird, be it friend or foe, has full and free run of the open airspace. As the game progresses, certain ledges will disappear.

You'll face three different foes in this game, each one represented by a different color bird. Hunters, the slowest of the three, are red. Bounders, the next highest rank, are grey. Shadow Lords, by far the most cunning of the lot, are blue. In addition, players who dally too long in any one round will have to face a pterodactyl.

Fans of the arcade game will notice a few changes in the game's format. The Egg Wave, for example, falls every third round as opposed to every fifth. The Eggs, too, behave quite differently. Instead of succumbing to the forces of gravity, they float about the screen like balloons. If you don't collect them within the specified time limit (my guess is around 10 to 15 seconds) a new bird of the next highest species will emerge. Whatever the reason for this change I'm glad the folks at Atari took liberties with this aspect of the game. It makes the action a bit less predictable and further challenges your flying skills.

One problem home game designers have yet to address successfully is that of maintaining proportions. For some reason, game characters and playfield elements seem out of sync sizewise in virtually all arcade translations. In most cases, one could fault the standard TV monitor, which is wider than it is high. Arcade monitors on the other hand stand tall and run shorter across the middle. Whatever the reason, things got a bit distorted in this translation. Your mount, for example, is just a hair too large in relation to the size of the gaps between the ledges. In coin-op *Joust*, one could fly through these openings blindfolded. Here the experience rivals that of trying to thread a needle while wearing mittens.

In the end though, you'll find these quirks only temporarily annoying. This game, I'm happy to report, is no turkey.

Stay on the bottom third of the screen. You have the most room to maneuver here.

POPEYE 🕹🕹🕹

Parker/Atari VCS

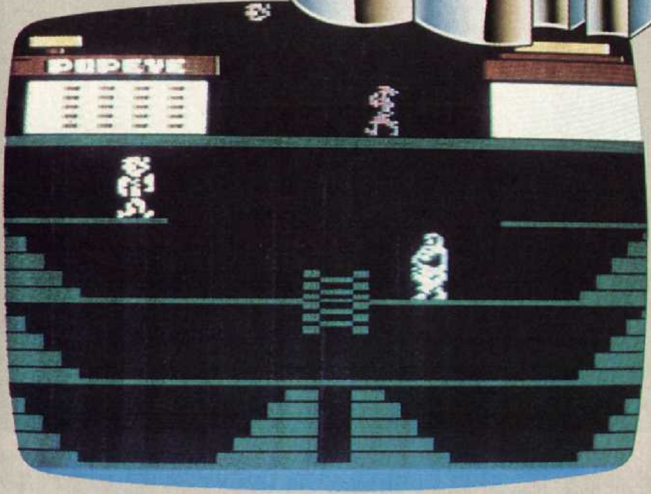
By Randi Hacker

The eternal triangle. Dozens of blockbuster novels and movies have successfully exploited its mysteries so why not a video game? It's a natural and it works very well in Parker's new adaptation of *Popeye*. For those of you who are unfamiliar with the set-up, here's a brief recap of the action so far: Popeye loves Olive, Brutus loves Olive, Olive loves Popeye. Why anyone would be attracted to someone with a body like Olive's is beyond me but I guess when your forearms are bigger than your biceps, you can't afford to be picky. Never mind. Olive loves Popeye and Brutus can't stand it.

As in the arcade game, you get to manipulate Popeye around what appears to be a split-level pier. He hops up and down steps and collects hearts thrown by Olive. He also has to punch jugs thrown by Brutus and avoid Brutus' fists. Brutus likes to punch Popeye and he

hits
&
misses

can knock you out even if he's on the platform below you



because he can jump. You can't jump. You can, however, eat spinach and then give Brutus a taste of your fist. The object is to collect all the hearts that Olive throws. If you miss too many of them, the game is over.

There is a slight variation in the second screen. Creditors, it seems, have finally caught up with Wimpy and carted him off somewhere. He has been summarily replaced by a trampoline so that there are two instead of one. This doesn't detract a bit from the game.

Unfortunately, the graphics have lost quite a lot in the translation. Olive Oyl is red and, perhaps, rancid. The jugs look a lot like bricks and there is no Sea Hag. There is also no punching bag or bucket.

Popeye is also much easier in the home version. It's easier to get him up and down stairs. Sometimes a little too easy. That is, he'll go up and down by himself if you're not careful. He's especially fond of descending the ladder from the middle level to the lower level.

Graphics and omissions aside, though, the game is good. Most of the game play elements have survived intact making this a fine translation.

Concentrate on catching all the hearts. You can always beat up Brutus later.

MR. DO

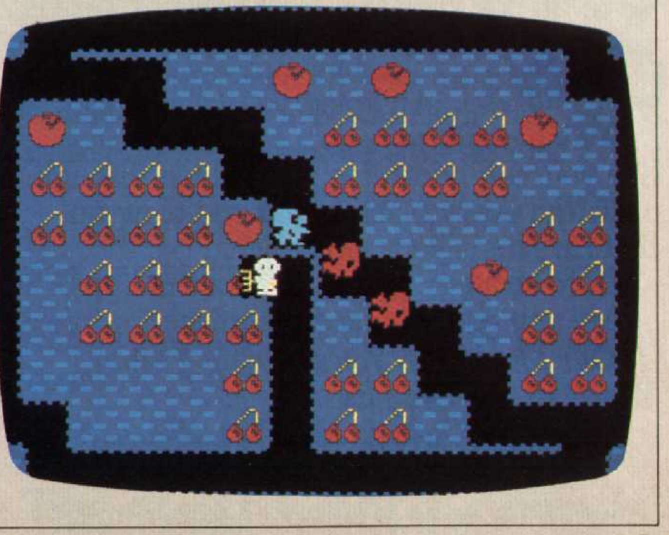
Coleco/ColecoVision

By Gary Miller

Mr. Do digs. *Mr. Do* dodges. *Mr. Do* destroys. In short. *Mr. Do* DOES. And what *Mr. Do* does is entertain. *Mr. Do* is one of the latest arcade sensations from Universal, and Coleco has adapted the contest as a cartridge for its own ColecoVision home game system. And what Coleco has done, as usual, is a darn good job.

Mr. Do is a likeable fellow, reminiscent in appearance of Wee Willie Winkie in his nightcap. He spends all day traveling through an orchard full of cherries, mowing paths (much like digging tunnels) as he goes and relieving the garden of its tasty contents. But, as in any arcade contest, bad guys are making things rough on our mild-mannered hero. The bad guys apparently aren't vegetarians because they usually bypass the fruit and go directly for Mr. Do.

Mr. Do completes the screen and advances to a new one in one of two ways. Either he must collect *all* the fruit on any given screen, avoiding the troublemakers as he goes, or eliminate all the monsters on any one screen. This he does by a) shooting a powerball at them (he carries powerballs with him each time he enters the garden), or b) dropping apples on them and crushing them. Yes, there are apples in this cherry orchard, but Mr. Do never harvests them; they are purely for defense. Do must burrow (or mow) under the apples and then get out of the way so they can drop on his adversaries, or he can tunnel beside an apple and push it on top of his unsuspecting foes. Kill two, three or more bad guys with one apple, and it's more points for Mr. Do. Timing is of the utmost importance as unfortunately, Mr. Do can *also* be crushed by an apple.



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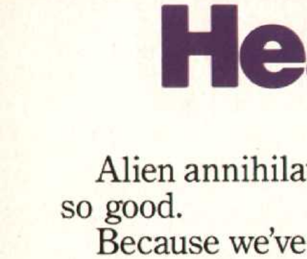

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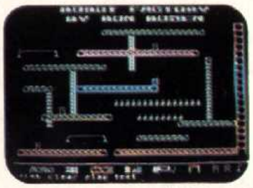

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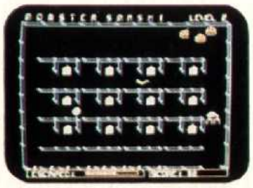

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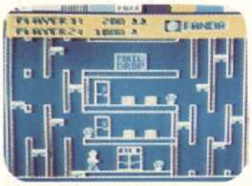

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Once he eliminates the nasties, he advances.

After all the bad guys leave the spot from which they appear on the screen, a "treat" appears. Eat the treat, and Mr. Do earns bonus points along with some bonus problems—Blue Chompers and an Alphamonster who pursue Mr. Do. These, too, must be wiped out. The Alphamonster carries the letters E, X, T, R or A, and if Do can shoot a powerball or drop an apple on these letters and spell EXTRA an extra Mr. Do is added.

Most of the travelling takes place in the pathways mowed by Mr. Do. However, bad guys have the capability of magically transforming into "diggers", which can travel through unmowed grass and attack Mr. Do by surprise. Blue Chompers are also capable of moving through anything to get at Mr. Do.

The home cartridge of *Mr. Do* includes all the play features (minus the intermission cartoons) of its coin-op counterpart. The action is fast and furious, especially on high levels of play. The graphics are well done, and the sounds are virtually identical to the arcade game. Coleco has included ten different screens in this top-notch version. Minor differences from the coin-op, such as a not-too-visible powerball, may be noticed by fanatics of the arcade game.

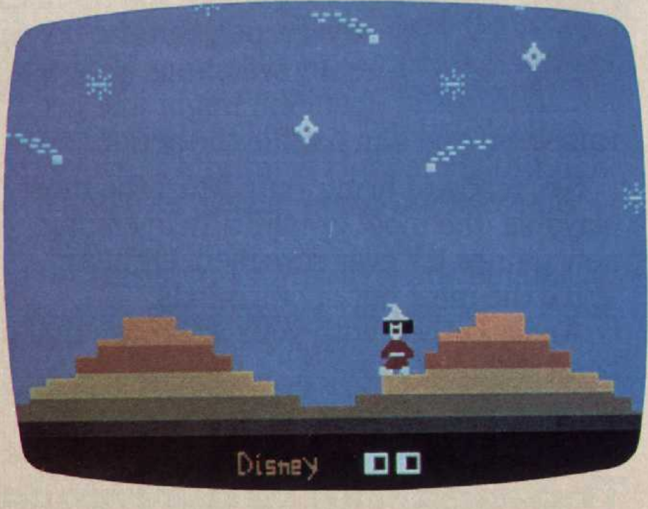
When beginning a screen, stay where you are and fire a powerball directly at the center of the screen where the bad guys emerge.

SORCERER'S APPRENTICE

Atari/Atari VCS

By Randi Hacker

"Catch a falling star and it becomes bucket." Well, that's not really how the old (very old) song goes but it certainly sums up the point of at least the first screen of *Sorcerer's Apprentice*. The game gets its name and characters from the vignette in Walt Disney's *Fantasia* which, in turn, takes its scenario from the musical piece by Dukas which, in turn, well, that's enough.



The story is as follows: A lazy, young apprentice sorcerer (portrayed brilliantly and poignantly by Mickey Mouse) has gotten hold of his master's magic wand and casts a couple of spells which render brooms capable of carting buckets of water from the outdoor well. This takes place before sinks and faucets. Unfortunately, because he's an amateur, he soon loses control of the brooms and they cart in so much water that it turns the entire room into a sort of aquarium. Your job is to keep the water at a manageable level.

The game consists of two screens—one in which you catch stars and shoot at comets and the other in which you try to intercept the brooms as they relentlessly go about their water-carrying business. Aiding you in keeping the water level down are your buckets. The more stars you catch, the more buckets you accumulate and the more efficiently they can bail out the basement. You catch stars by positioning yourself directly underneath them as they fall. You shoot comets by pushing the fire button at the same time that you move the joystick in the direction in which you wish your bullet to go.

While it is a good thing to stay in the first screen for a long time and accumulate legions of buckets, it's to your best advantage to make a quick trip down to the lower level to check on the brooms now and then. They cart water in like nobody's business and unless you stop them by scurrying back and forth and up and down a stairway and wiping them out, well, you'll drown. Apparently, Mickey doesn't know the spell that conjures up lifejackets. You've got to be careful not to run too furiously or you'll dash right off the staircase.

While the graphics are lovely to look at and very evocative of the magnificent cartoon and while the classical piece plays in the background, the gameplay is dull, dull, dull. We know that this is aimed towards the younger video game player and is supposed to be educational but we question just how long it's going to keep their interest. And as long as we're questioning, we've got one more: What is it supposed to be teaching anyway? Our only hypothesis is that it instills a healthy fear of brooms and cleaning paraphernalia which means that, when the kids who play this game grow up more people will need to be employed as maids.

In the basement, wipe out as many brooms as you can then hotfoot it back up to the fresh air. While you'll never be able to completely clear the screen of brooms, you can at least keep their numbers under control.

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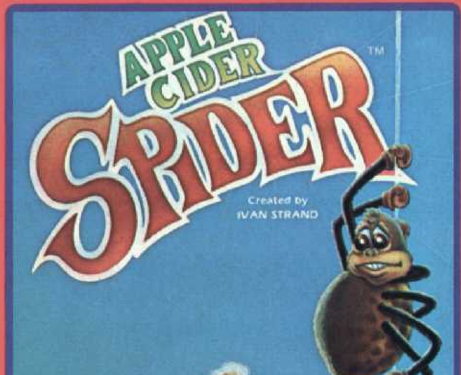

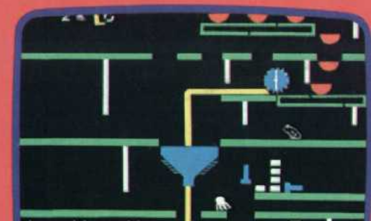

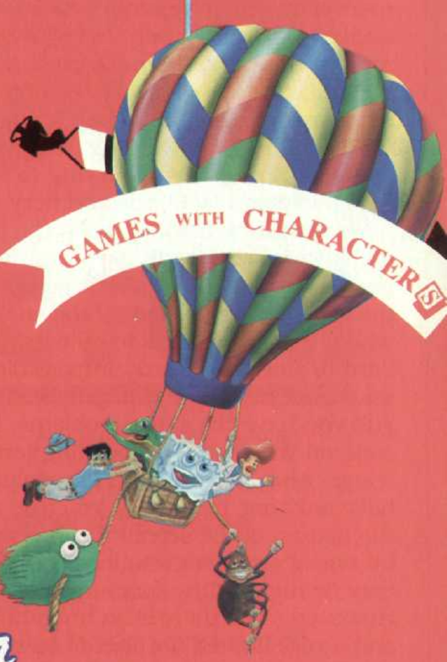

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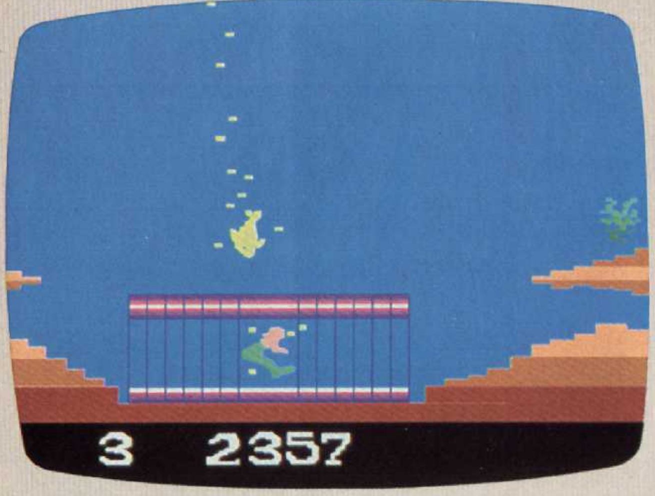


FATHOM

Imagic/Atari VCS

By Charles Ardai

In Imagic's newest release for the Atari VCS, *Fathom*, you play a dolphin and a seagull. More accurately, you play a dolphin who is also a seagull. Now, I've been told that dolphins are among the most intelligent creatures known to man, which leads me to wonder how one of them could have gotten himself stuck in a monotonous game like this.

In all fairness to Imagic, *Fathom* isn't all that bad. The plot is nice: the daughter of Neptune (a comely mermaid named Neptina) is being held captive in an undersea energy prison. In order to rescue her, you must pick up the three pieces of Neptune's trident by tagging starfish. You have the choice of swimming in the shape of a dolphin while trying to catch seahorses (as the same time avoiding octopi and seaweed), or flying as a seagull while trying to touch pink clouds (and avoiding blackbirds and fiery volcanoes).

You swim by holding down the fire button, and fly by quickly and repeatedly pressing the button, flapping your wings a la *Joust*. Your actual movement around the screen is controlled by the stick. This is precisely where the game starts to go wrong. As a dolphin it is hard to steer and nearly impossible to touch all of the seahorses without running into any of the nasties. As a gull you have the same problems, but you also must contend with the thumb-killing torture of flapping your wings. Also, whether you're a dolphin or a gull you have only one life, which you lose when the timer at the bottom of the screen reaches zero. Each time you hit one of your foes you lose precious time, which can only be regained by touching a seahorse or pink cloud. However, since there is an unending supply of enemies and a very limited number of seahorses and pink clouds, staying alive becomes frustrating.

Even though this game has a whole lot of fast-paced action, the actual play quality is tremendously dull. True, there are over 150 different screens, but they are all so similar that it's hard to tell them apart.

The only thing that even begins to redeem this game is the high quality of the graphics. The coastline and volcanoes are beautiful and highly realistic, as are the clouds and the blackbirds. The colors are glorious.

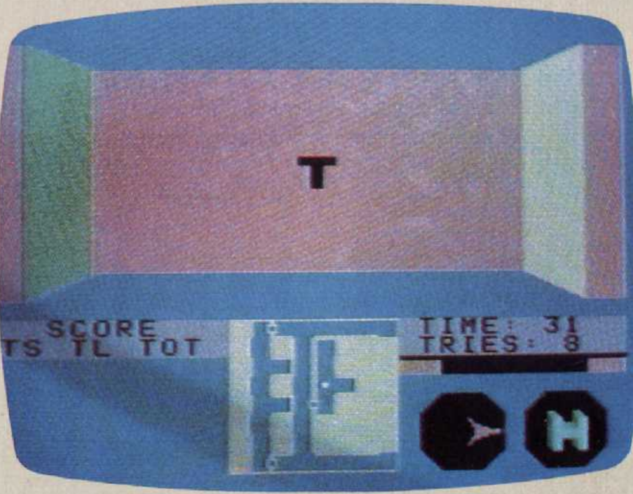
To save your thumb when you're a seagull, fly to the top of the screen and then release the button; you'll be able to glide through the screen without pressing the button.

ESCAPE FROM THE MIND-MASTER

Starpath/ColecoVision

By William Michael Brown

If Starpath had only wanted to give ColecoVision owners a chance to see what all the Supercharger excitement was about, they couldn't have picked a better game to translate than *Mindmaster*—one of the few games around that is as challenging for adults as it is for younger players. *Mindmaster*'s inside-the-maze graphics, multi-level mazes, dexterity tests and IQ puzzlers immediately marked it as a real VCS original.



As a ColecoVision translation, it's a good lesson in how not to mess up a perfectly good game. Everything from the VCS/Supercharger version is here, right down to old Masterbrains himself wandering around in the yellow corridors. The flickery VCS graphics have been cleaned up somewhat, and the direction indicator has been slightly redesigned (it's easier to find now). The only change is that the maze map now requires you to explore every corridor before you get a complete map—a bit of extra challenge for all of us who know the VCS version and might find this one too easy.

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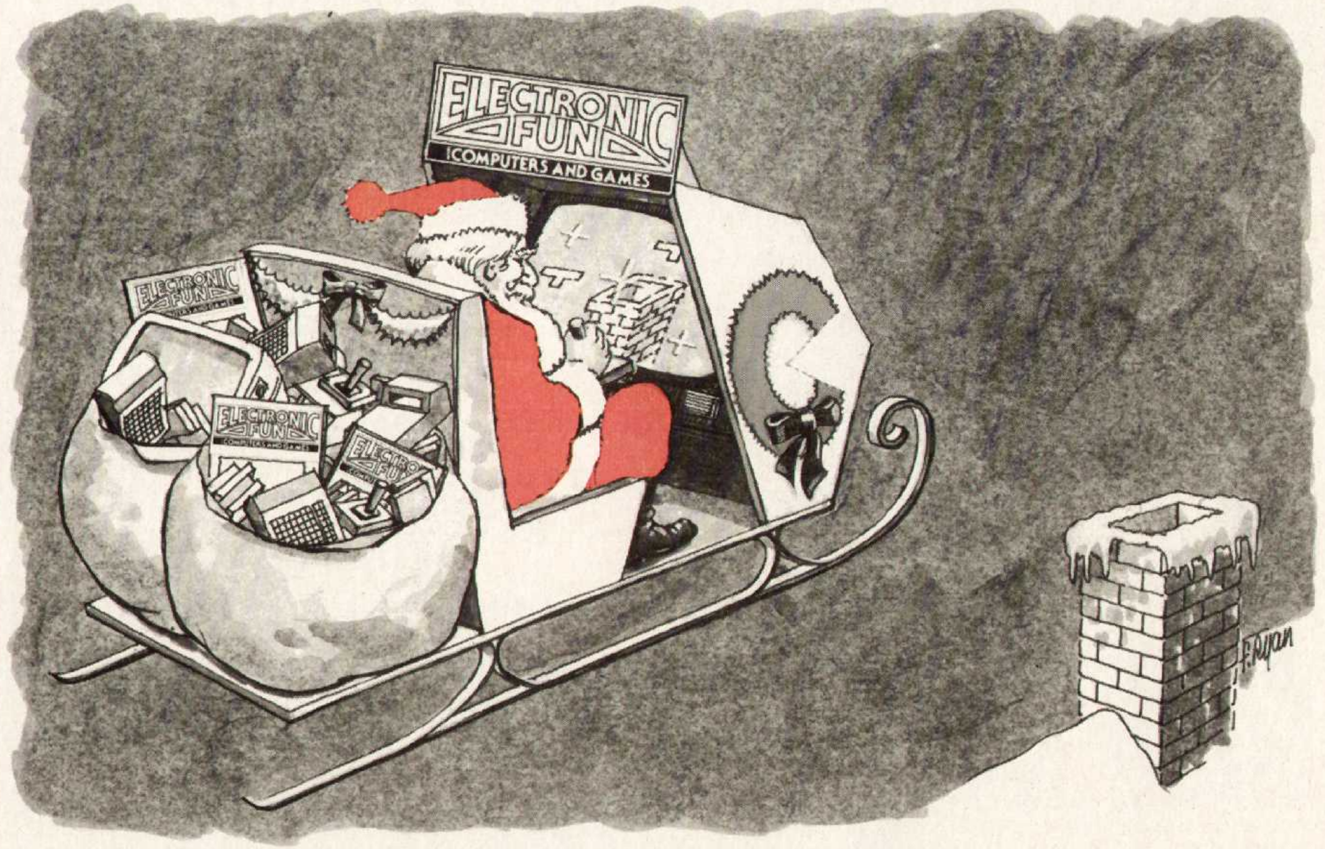

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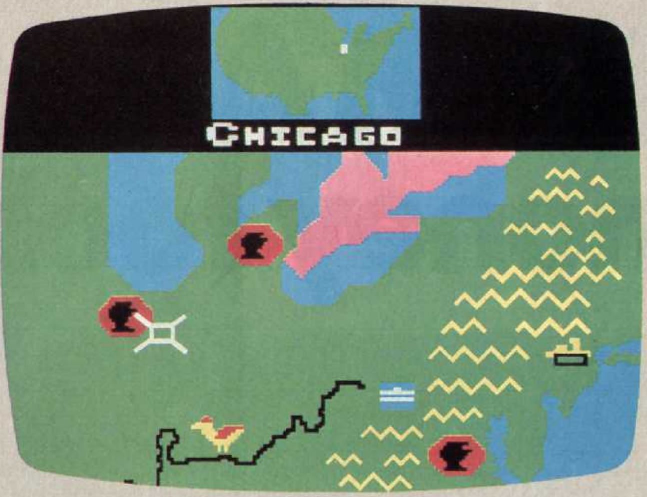

WAR ROOM ⊥⊥⊥/

Odyssey/ColecoVision

By William Michael Brown

Let's face it, gang. War may indeed be hell, but thermonuclear war—as waged in video games like *Missile Command*, *Computer War* and now *War Room*, anyway—is good, clean fun. You say dozens of MIRVed warheads turned all your cities into puddles of slag? Hey, no problem—just punch "reset". Nervous Nellies may need a little introductory pussyfooting to comfort them, such as the paragraph in *War Room*'s directions which argues that the game's "extremely graphic and realistic representation of a nuclear confrontation between the United States and Russia... demonstrates why no responsible government would want to resort to nuclear warfare in any other than game form." But all gamers know the score: Nuke 'em till they glow.

If this pinhead's vision of World War III is yours, you'll find *War Room* megatons of fun. And if you *are* justifiably nervous about being vaporized in the near future, *War Room* lets you have things both ways: an interesting, well-designed game that's also a pointed comment on the whole idea of winning a nuclear war.

The basic game presents you with a huge scrolling map of the continental U.S., liberally freckled with a total of 42 cities, each of which produces a specialty: food, raw materials, machinery or laser fuel. The fuel is for your hunter/killer satellite, perched way out in space and ready to ray down fleets of Russian nuclear satellites that home in on various regions of the country. The technique here is basic *Missile Command*: locate the enemy satellites on the radar, get your satellite's cross hairs on them, and then push the fire button to knock out as many as you can.

This would be tough enough—but you've also got to keep the whole U.S. economy going during the intermission between attack waves, or you'll run out of laser fuel. Raw materials cities must have food to keep producing for the machinery cities and laser fuel cities need the products of all three other types of cities to go on producing laser fuel. It's your job to keep entering each city, collecting its products, and the transporting them to where they're needed. It's complicated, messy and must be done under impossible time limits—and if the spies hidden in each city catch you while you're working, you have to nuke the whole joint to keep it from becoming an enemy launching site.

Despite the somewhat unrealistic touch of letting some cities be rebuilt if you survive long enough, the whole thing boils down to an impossible job—you basically can't win. You can't nail all the satellites, you can't save all the cities—and once you begin to lose even a few, you're well on your way to the end. In fact, the only way you can hold on for very long at all is to let everyone but the weapons producers take it in the neck. Funny... thought I read something in the newspaper the other day about...

Use the pause feature to stop the game temporarily when each attack is announced. More than anything, you need time to think.

PARTY MIX ⊥⊥⊥

Starpath/Atari VCS with Supercharger

By Randi Hacker

A lot of games claim to be two-player games. Well, we say, Ha! We say this is just a cover-up for one-player games because in very few two-player games can both players actually play at the same time. *Party Mix* succeeds where other multi-player games fail. Not only can four people play but four people can play all at the same time.

The five games in *Party Mix* are all different but they have one thing in common—all of them require teamwork. You and your partner are pitted against someone else and another partner in contests of speed, strength and accuracy. You use four paddle controllers in this free-for-all with everyone spinning and pushing fire buttons like nobody's business.

The first game is called *Bop A Buggy*. One team is in charge of driving, the other in charge of dropping bombs. While maneuvering the insect-like car through the byways of several obstacle screens is great fun, there is no thrill really like the thrill of dropping explosives on automobiles. The next game, *Tug of War*, is pretty self-explanatory except that this particular contest is set in medieval times and you move your stalwart team of squires by furiously tapping the fire button. The faster you tap, the more ground your team gains. If you really get into this, the room begins to sound as if it's been invaded by a team of maniac woodpeckers.

Wizard's Keep is a sort of Dark Ages shooting gallery. Team members control evil looking wizards with

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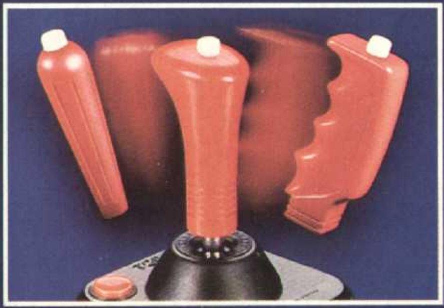

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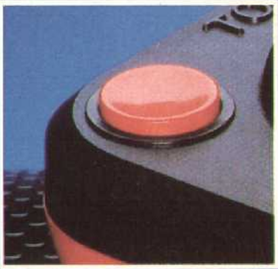

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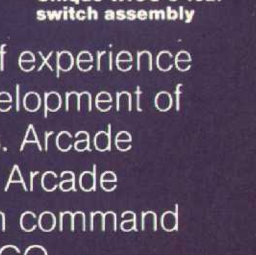

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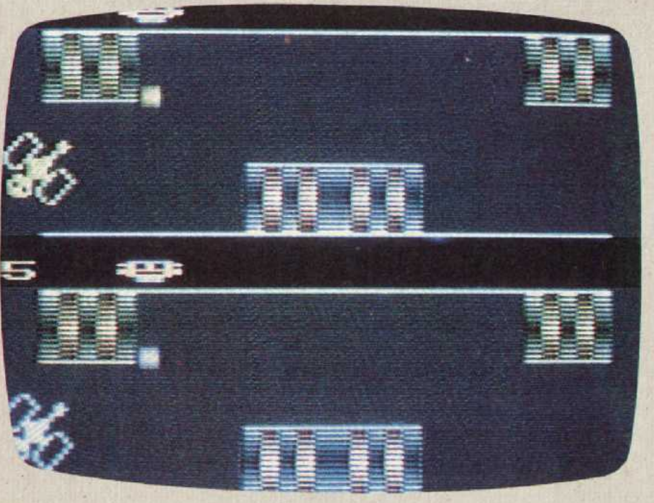
rotating arms. As the arm rotates, you press the fire button which releases a projectile you're aiming at a series of objects that glide down the right side of the screen. This requires no small skill in calculating trajectories and other stuff governed by the laws of physics and mathematics. *Handcar* is a race game. You and your partner must rhythmically pump a handcar over the finish line. Your character's hands must be on the pump at all times to achieve maximum speed. If you break the rhythm, well, the car slows up and we certainly don't want this to happen.

While all the games are very entertaining and really could add life to a party, we've got our favorite. It's called *Down on the Line* and is something of a pastry relay race. The two teams consist of pastry remover and pastry storer. The remover has to take colored pies off a conveyor belt and hand them to his partner (the storer) who then has to place the pie on a shelf of the same color. The action really gets fast and funny, so the game appeals on two levels: competitive challenge and bakery humor.



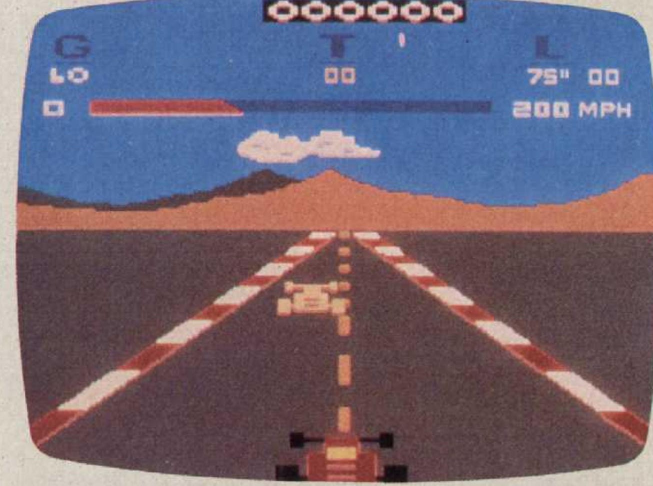
In HANDCAR, establish a rhythm with your partner and increase your speed together.

POLE POSITION

Atari/Atari VCS

By Gary Miller

Whether or not you've experimented with the arcade verison of *Pole Position*, the cartridge's graphics are likely to disappoint you. You're "treated" to a car on a track, with a background consisting of a couple of brown and green mountains, a blue sky and some white clouds. Arcade *Pole Position* fans will immediately miss the billboards. There's not even one in this cart. Considering they all advertised Atari games and created half the originality of its coin-op counterpart, Atari's omission of them in this cartridge is a mistake. I would have left out the clouds.



Also missing and supposedly forgotten are the other cars at the start of the race. Whether you begin your trek at the pole position or in eighth place, you still start the race alone positioned in the center of the track. Beginning a race by yourself is humdrum and uninteresting, much like singing barbershop quartet all alone. The race is little different from the qualifying lap. And you never really know where you are on the track... this cartridge's designers quietly omitted the finish line! The occasional cars that you do meet on the track, don't resemble any cars, domestic or imported.

There are two more unfavorable things about this cartridge. One is the laughable attempt to drive 200 miles an hour with a joystick. You must change lanes moving the stick right and left and switch gears by pushing it up and down. The button serves as a brake. The paddle controllers would have been more effective as would a driving module.

Secondly, it's very difficult to check your status in the game. If you qualify for the race, you don't know. Nothing indicates if you've qualified or what position you're in.

Giving due credit to the company, Atari has closely duplicated the sounds (minus the speech, of course) of the original coin-op and the background terrain does move convincingly past the racer. Unfortunately, sound and half-good graphics minus most of the play features that made the coin-op a success equals a cartridge that's less than desirable.

When going around the curves, barely move the joystick in the direction in which you're turning. Too much pressure will send you off the road on to the red and white shoulders, and this wastes valuable time.

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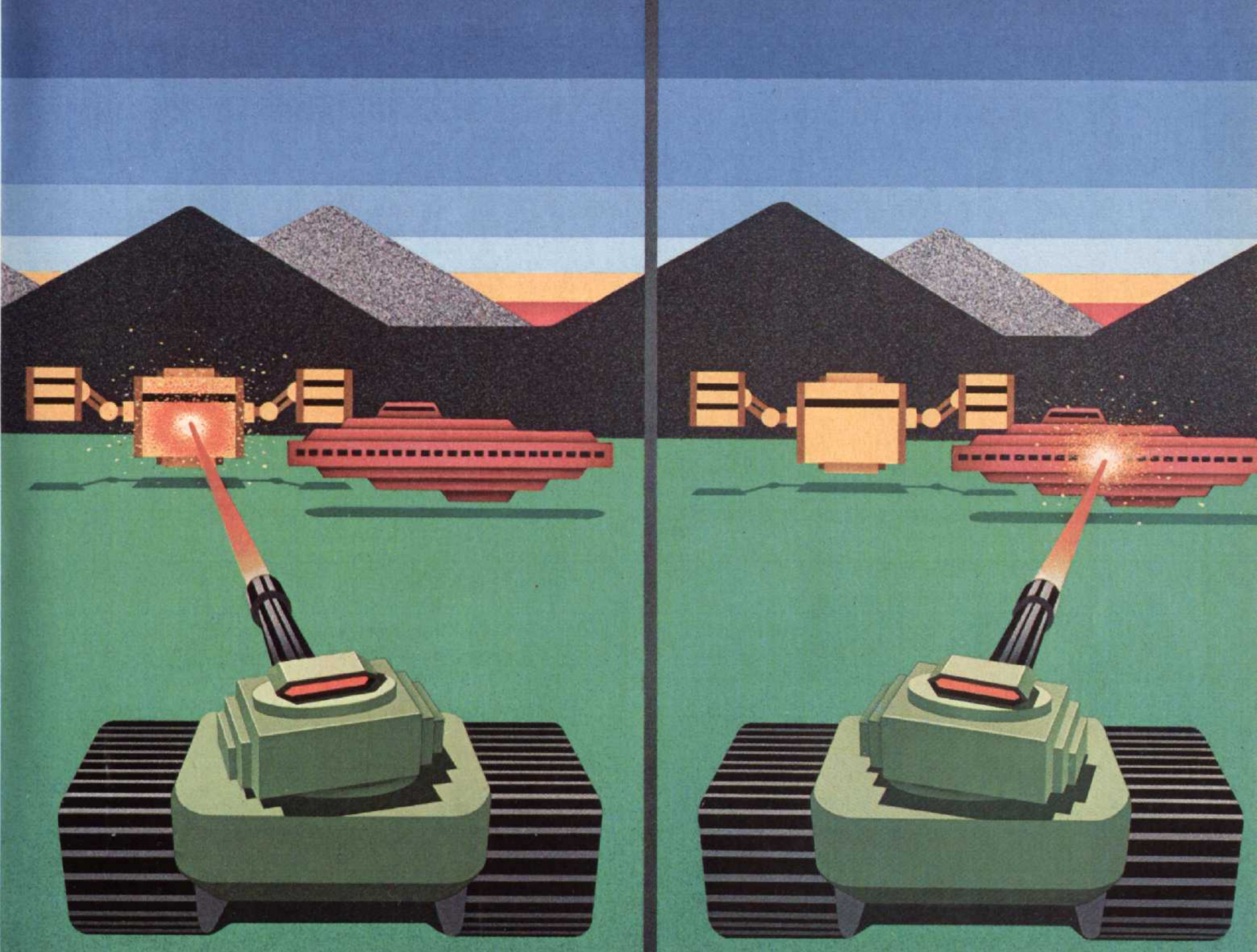

Which player is making a tactical error?

You've fought BATTLEZONE™ tanks, flying saucers and fighters in the arcade. Now it's time to protect the home front. Because Atari's BATTLEZONE is now prepared to wage war right in your own living room.

The player on the right will most likely fail in his mission. He should've hit the fighter first. Even though it is worth 3,000 points less than the flying saucer, it is far more dangerous. It can destroy. The saucer can't.

There's another way you can rack up extra points, and you don't even have to fire a shot. By moving your tank to one side, you can often lure one enemy into another's line of fire.

Surviving BATTLEZONE is no easy mission. If you're up for it, climb into your troop transport and make tracks to the nearest store that stocks Atari games.

Only Atari makes BATTLEZONE for the ATARI® 2600™ Game, Sears Video Arcade† systems, and a version exclusively for the ATARI 5200™ SuperSystem.

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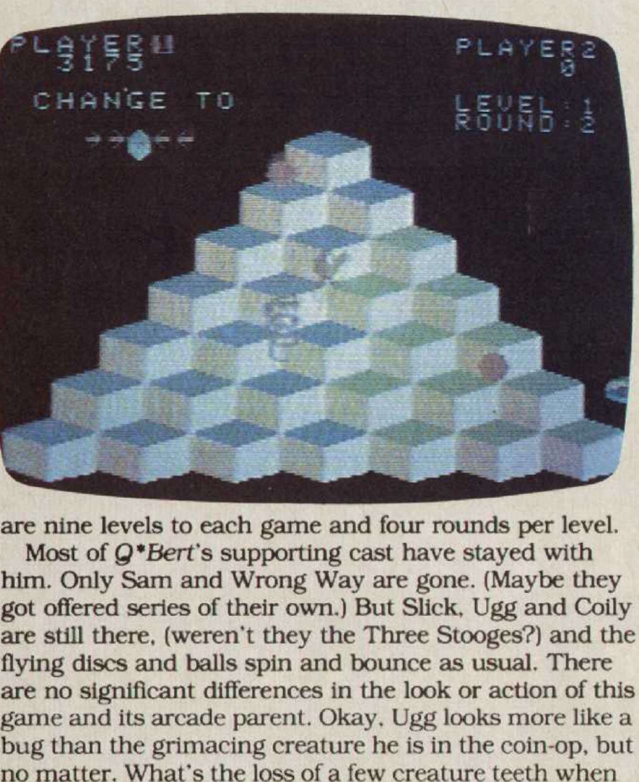
Q*BERT *1111*

Parker Bros./ColecoVision

By Marc Berman

If you can't wait for the *Q*Bert* cartoon show, you can still see the old hosenose on the home screen with this excellent cartridge from Parker Brothers. *Q*Bert* afficionados will not be disappointed. The spirit of the game has made the transition intact, as have Q*Bert's expletives. The object, in case you haven't heard, is to earn points by jumping from cube to cube on a pyramid and changing the colors of the cubes. There are nine levels to each game and four rounds per level.



Most of *Q*Bert*'s supporting cast have stayed with him. Only Sam and Wrong Way are gone. (Maybe they got offered series of their own.) But Slick, Ugg and Coily are still there, (weren't they the Three Stooges?) and the flying discs and balls spin and bounce as usual. There are no significant differences in the look or action of this game and its arcade parent. Okay, Ugg looks more like a bug than the grimacing creature he is in the coin-op, but no matter. What's the loss of a few creature teeth when so much of the game has survived? Even the title/demo screen and Q*Bert's theme are there.

Handling the controller is a little odd. Parker Brothers says, "turn joystick to the right so that the four corners make a diamond shape." That position lets you approximate the diagonal movement of Q*Bert. Surprisingly, it feels quite natural to hold the controller at that angle, and since you don't use the firebuttons, it takes very little getting used to.

There are three games for one or two players. The only difference in the games is the number of Q*Berts you get. In Game One, you start with five; in Game Two, you have four; and in Game Three, you have three Q*Berts.

...Look... I can't go on with this dispassionate review of my secret passion. Yes, the closet door must finally open. When *Q*Bert* was first released in coin-op I dismissed it as a calculated,cutesy-poo follow-up to *Pac-Man*. But over the months I was drawn back to *Q*Bert* again and again. Yes, I admit it: I enjoyed it. Nay—I loved it. There. The truth be told. Say what you will, but for me there was no choice. It's just the way I am and I feel better now for admitting it. And I am grateful to Parker Brothers for allowing me to get my kicks in the privacy of my own home instead of searching for *Q*Berts* on street corners and in dimly-lit arcades. Even if you've never tried the arcade version, check out the cart; you may discover the real you.

Coily must be within three jumps of reaching Q*Bert before you jump onto a disc, otherwise he won't be lured off the pyramid.

TIME PILOT *1111*

Coleco/ColecoVision

By The Unknown Arcader

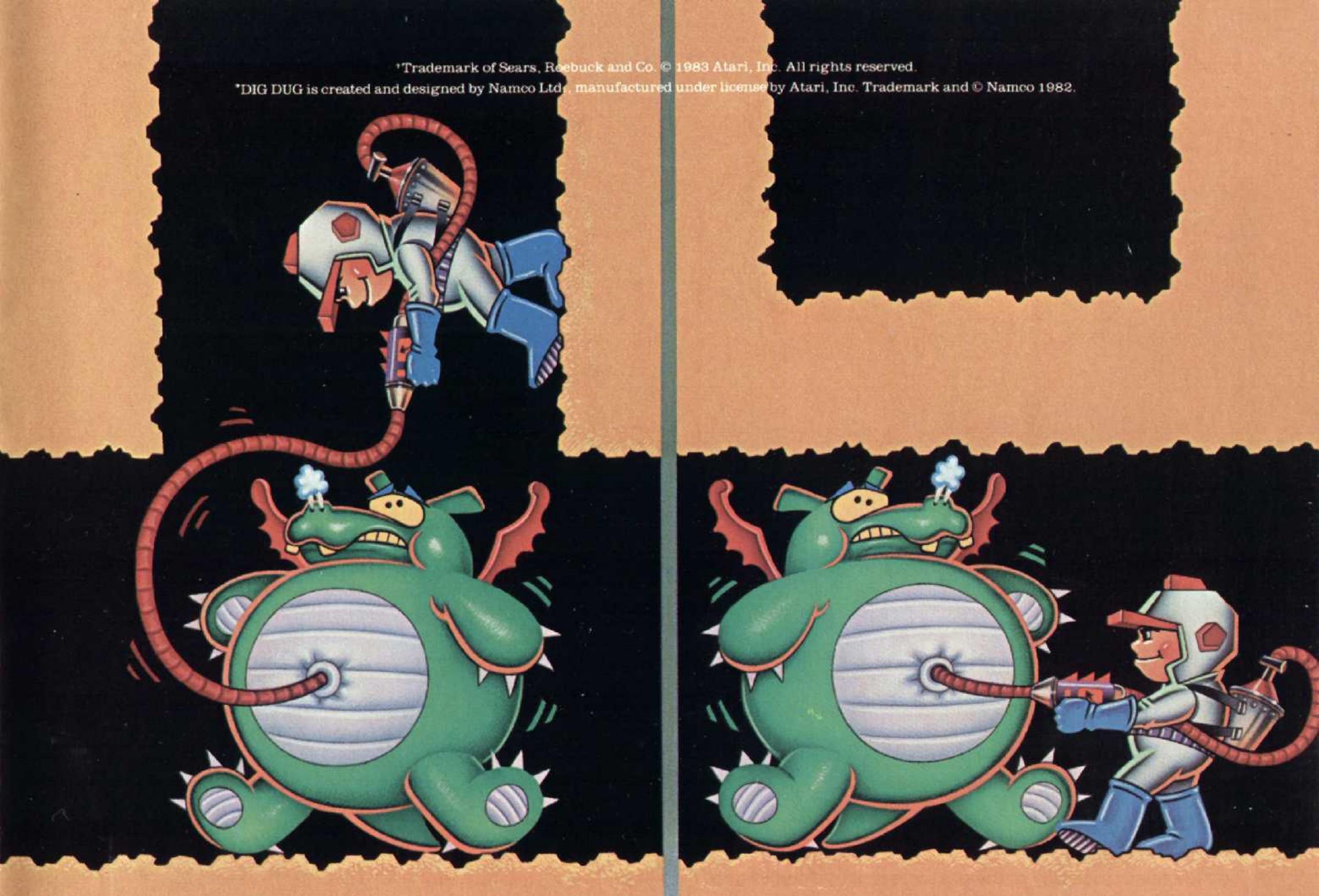
When *EF* asked me to check out the home version of *Time Pilot*, I didn't expect much. Since the planes and stuff are small to begin with, I thought the home version would make them all look like specks or boxes.

Well, I've got to hand it to Coleco. *Time Pilot* looks pretty good, but more important, it plays like a bandit. Your time-traveling aircraft must battle enemies from four different time periods. That's right: four. The UFO battle (familiar to arcaders) isn't here, but, hey, if you want spaceships, play a space game. I sort of like the fact that Coleco left out the UFO's, but I do have one question: Why does the jet fighter battle take place in 1985? Does Coleco know something we don't about foreign policy, or is that when they expect the popularity of this cart to peak?

Beside the jet fighters there are the familiar biplanes, monoplanes and helicopters. There are four difficulty levels; the third plays most like the arcade game. Naturally there's a one or two player option.

You can tap the fire button for one shot or you can hold it down for three shots in a row. Multiple fire comes in handy when you're trying to get the big red, blue and black bombers, the dual-prop chopper or the zeppelin which require four or five hits to score. Serious competitors may want to use a more responsive joystick than the standard ColecoVision controllers. I didn't try it with the Super Action Controller, but the standard sticks feel as though you're piloting an F-16 with a '53 Studebaker gearshift.

Each game starts with five timeships, but you earn an extra one for each 10,000 points. If you're low on



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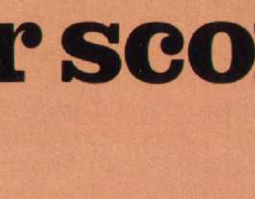
Which is the best way to inflate your score?



Better find out. We've done our groundwork on DIG DUG so well, it plays just like it does in the arcade. So don't dig yourself a hole. Like the player on the left. Sure he'll score points for blowing up the Fygar™ in a vertical path. But blow up the Fygar in a horizontal path, like the player on the right, and score twice as many points. A landslide.

You can dig up even more points by uncovering a bonus veggie. But you get only one on each level. All you have to do is drop two boulders and you'll see it. Buried treasure disguised as a veggie.

Only Atari makes DIG DUG for the ATARI® 2600™ Game, Sears Video Arcade[†] systems, and versions exclusively for the ATARI 5200™ Super-System and all ATARI Home Computers.

So get to your nearest store and dig into your pockets. For DIG DUG.

Here comes Dig Dug™[*] from Atari.®

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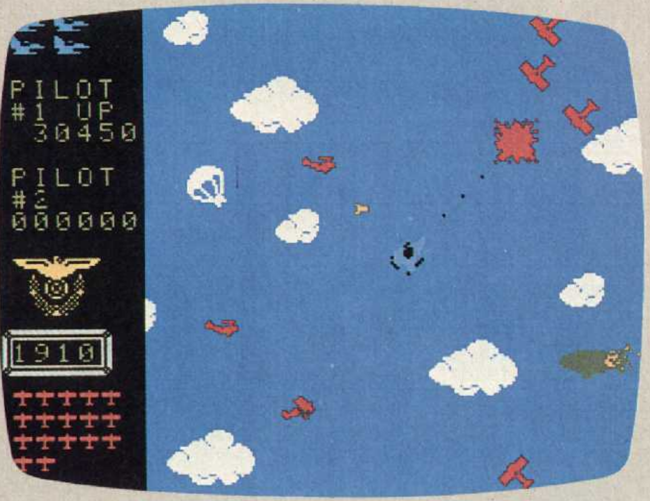


ships, it's naturally smart to go for big point targets or pick up parachutists.

There is a pause button which stops the game in mid-air, in case you have to answer the phone, take a pie out of the oven or go to college. Weird music plays in the interim, sounding like muzak in a mental hospital. But as far as home games go, Coleco's done a really fine job with this new cart. Aces.

You are faster than any of the big targets. If you don't have the range to get off four or five shots at once, fly in a zig-zag path parallel to them, shooting them at each opportunity.

BERZERK

Atari/Atari 5200

By Charles Ardai

Speech is a wonderful thing. Humans have it, we think that birds might, we're pretty darn sure that dolphins do, and now so do video games. While this may not seem like news to you, that's only because you probably still haven't heard how the Atari 5200 handles voice synthesis—without any expansion module. That's right. The voice comes packed right inside the cartridge. And this means that for the price of a regular cartridge, you can have a great *talking* game. Atari's first voice-accompanied offering is the home version of the arcade classic *Berzerk*.

And what better game than *Berzerk*, the game that introduced people to talking games? *Berzerk* without voice is a lot like *Donkey Kong* without the girl; it's playable, but most of the motivation is gone. And even better, the programmers obviously didn't have to sacrifice gameplay to get the voice, since the game is excellent. From the familiar shimmering logo to the smirk on Evil Otto's face when he mows you down, every graphic detail is perfect. The animation of your helmeted spaceman and the killer robots is quite fluid, making game action somewhat better than the clunky VCS version.

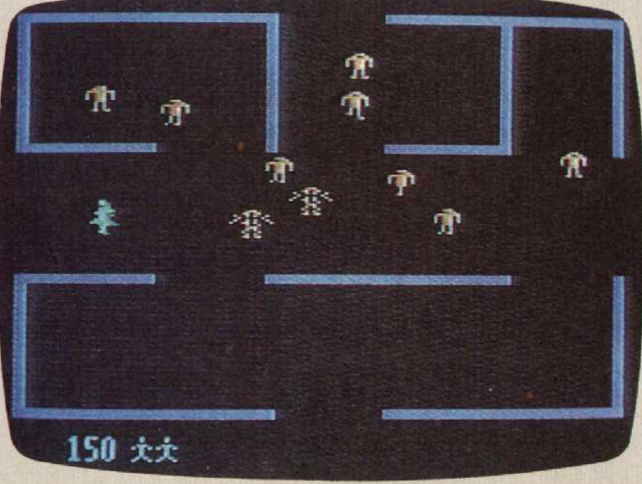
As in the arcade, you play a man (actually three men, one at a time) trapped on a planet of mazes. These are not very complex mazes, but navigation is not your only concern. These mazes are populated by deadly, laser-shooting robots. If our hero touches anything, including the thin purple walls, he fries in a glorious display of color. If for some reason a player stays in any given maze for too long, Evil Otto, an indestructible bouncing head wearing an evil grin, appears. Otto can travel through anything as he follows a beeline course to your man. Incidentally, you are charged a penalty if you leave a room before finishing off all the robots, and you receive the humiliation of having your 5200 shout after your retreating figure "Chicken! Fight like a robot!"

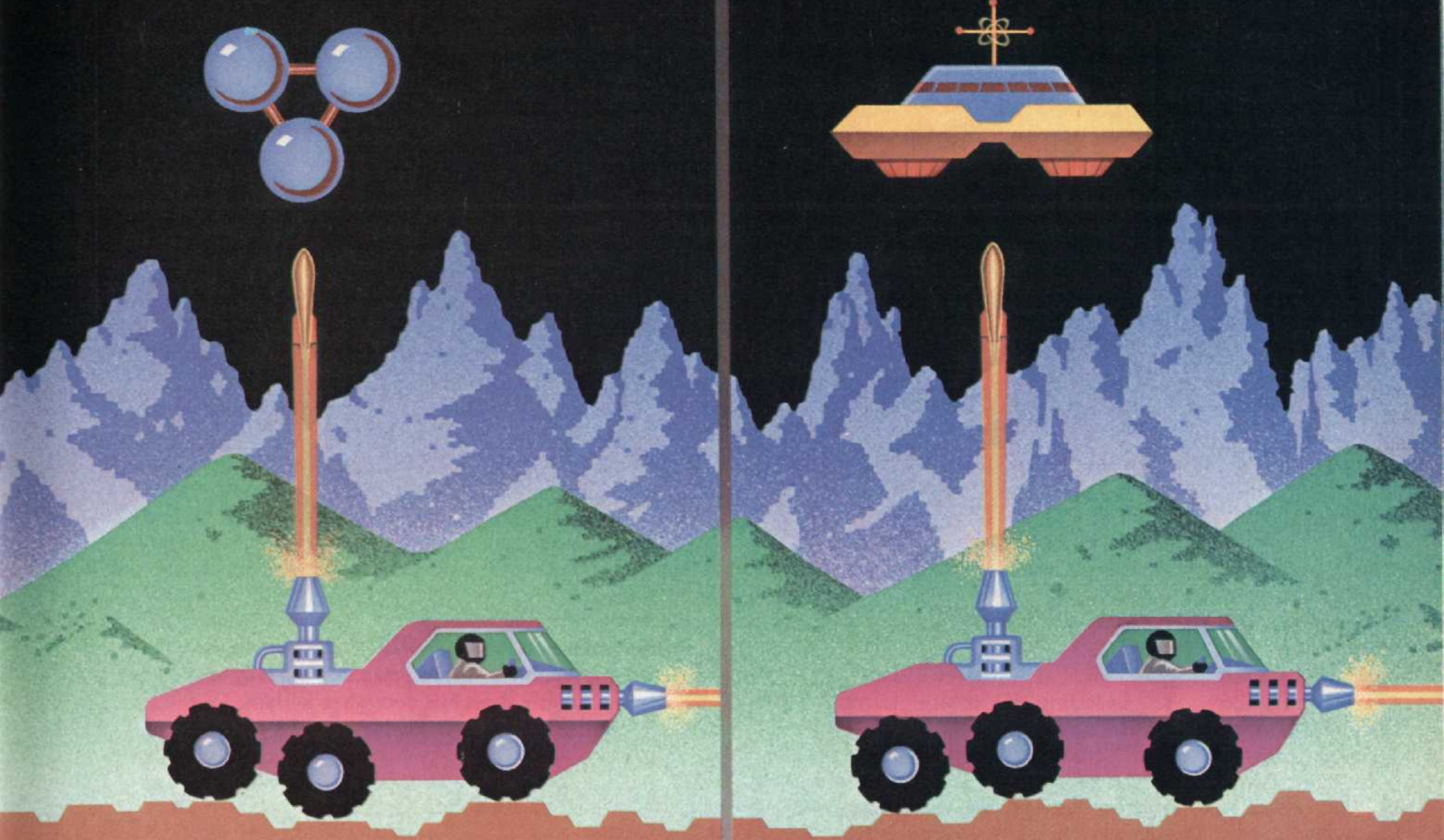
In addition to this admonition, the computer says such things as "Get the humanoid! Get the intruder!", "Intruder Alert! Intruder Alert!", and the ever-frustrating "Got the humanoid! Got the chicken!" And the best part of it all is that if you get fed up with being insulted by Evil Otto, you can always shut him up by turning off the sound.

The problems with *Berzerk* are twofold: the game gets much too hard much too quickly, and the Atari 5200 controllers are not at all ideal for playing any maze shootout. While the former isn't likely to bother avid players of the arcade game, the latter truly detracts from the gaming experience. (When is Atari going to come out with those new controllers already?)

For those of you who have been waiting years for a faithful adaptation of *Berzerk*, this is as close as you'll get to the arcades. And even if you're not that much of a *Berzerk* fan, you may want to get it for the realistic voice; frankly, it left me speechless.

Save time by luring the robots into walls. It isn't that hard, and it saves lots of time.





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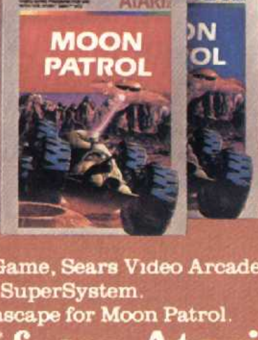
Which player is really firing up his score?



Think quick. The new home version of Moon Patrol looks so much like the arcade, it could fool the man in the moon. So don't find yourself in a crater. Like the player on the right. He'll get only 100 points for using his Moon Buggy to shoot down a Moon Strafer. While the player on the left will get twice as many points for shooting down a Crater Maker. A victory as great as the lunar landing.

Your score can wax even higher. You'll get 80 points every time your Moon Buggy jumps over a rock. But you'll get 100 points when you blow up a rock.

Only Atari makes Moon Patrol for the ATARI® 2600™ Game, Sears Video Arcade† systems, and a version exclusively for the ATARI 5200™ SuperSystem.

So get on your lunar module and scan your local moonscape for Moon Patrol.

Here comes Moon Patrol* from Atari®.

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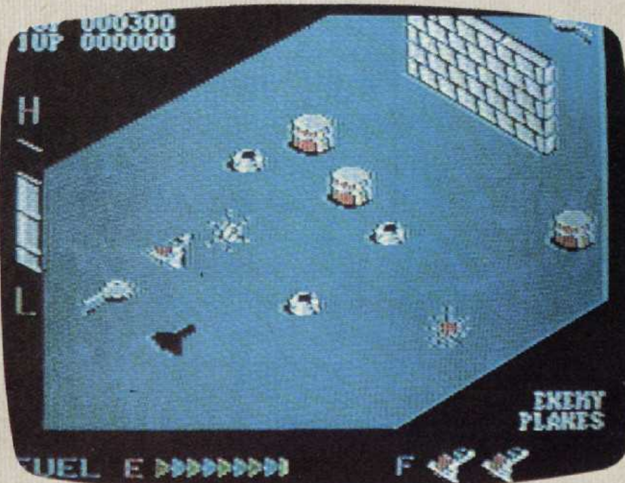


ZAXXON

Datasoft/Apple II

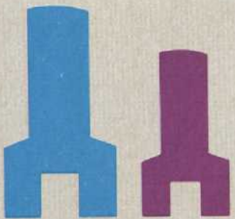
By Charles Ardai

When *Zaxxon* exploded on the arcade scene in 1982, it created quite a stir. it used an overhead, diagonal perspective to create a marvelous illusion of 3-D and, certain steering problems aside, it became an instant hit. It was referred to as "the game that couldn't be brought home." Recently however, *Zaxxon* has been brought home in many versions, none of which can hold a candle to Datasoft's *Zaxxon* for the Apple.

On the face of it, *Zaxxon*'s plot is no different than many other space games. You, in your trusty spaceship, must destroy as much of an alien stronghold as you can before running out of lives. In addition, you must shoot fuel tanks on the ground in order to replenish your own diminishing supply. However, the 3-D angle gives gameplay a whole new perspective.

The most important part of this change is in how you guide your ship. Unlike navigating on a two-dimensional plane, you must take your altitude into account. By pushing the joystick forward, you dip the nose of your fighter, and by pulling back on the stick, you cause your ship to pull up. You can accurately gauge your altitude in two ways, by looking at the handy altimeter or at the shadow you cast which grows as you descend. You must fly high to avoid crashing into the inconveniently placed walls and the armament on the ground. Yet if you don't dive low, you'll never be able to hit any of the squat fuel tanks. Diabolical. But a whole lot of fun.

In the opening segment of *Zaxxon*, you are flying over an asteroid-based fortress, whose fortifications you must destroy. After flying the length of the fortress, you must fly a short distance in space, in order to get to the next asteroid. In space you are attacked by a fleet of trigger-happy enemy pilots in spaceships. If you destroy all of the enemy ships before reaching the second asteroid, you get a 1000-point bonus. The second fortress is much like the first, except that it is more heavily armed. Upon reaching the end of this asteroid, you meet the giant robot Zaxxon whom you must destroy by getting six direct shots into his missile launcher.



The graphics in *Zaxxon* are stupendous. All the characters are highly detailed, and the outlines are crisp and well-defined. Your ship moves in a way that really creates the feeling of flight, which is a great accomplishment in a third person game. Datasoft has put in all those little touches that *Zaxxon* players love so; the opening demo, the bricks in the walls, your bubble shaped cockpit, even the artwork on the floor of the fortress. Old Zaxx himself is a sight for sore eyes.

While *Zaxxon* may not appeal to people who don't like shoot 'em ups, it is certainly the best version of this arcade classic that I've ever seen.

When you meet Zaxxon, don't use the game's rapid fire, pressing the button as fast as you can is the only way to get off six shots fast enough to kill him.

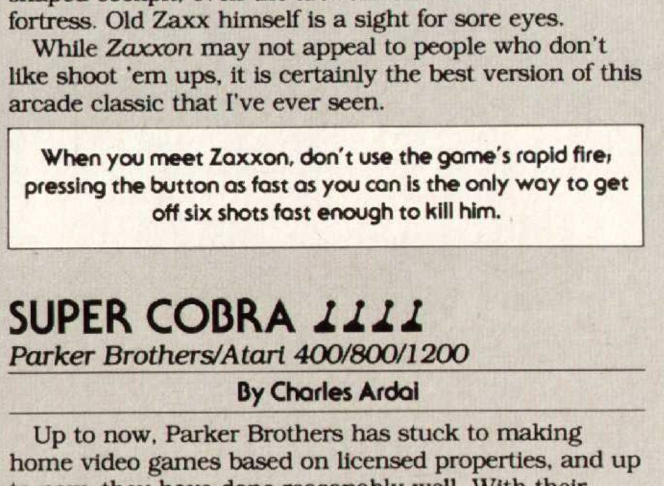
SUPER COBRA

Parker Brothers/Atari 400/800/1200

By Charles Ardai

Up to now, Parker Brothers has stuck to making home video games based on licensed properties, and up to now, they have done reasonably well. With their computer release *Super Cobra*, they have surpassed reasonably well—they have reached superb.

In computer *Super Cobra*, as in the arcade original, you are at the helm of a heavily-armed helicopter on a search and destroy mission, soaring high over mountains and through treacherous scrolling caverns. For lack of two action buttons, both your firing and bombing are controlled by the fire button, one bomb being dropped for each shot fired. You can move up and



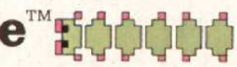
How to make sure you don't get 5 pairs of underwear for Christmas.

Fill in this checklist, tear it out and give it to your parents. Help them figure out that this Christmas you'd like software and hardware. Not underwear.

- ☐ **Ms. Pac-Man**[1]

- ☐ **Centipede™**

- ☐ **Phoenix**[2]



- ☐ **Vanguard**[2]

- ☐ **Jungle Hunt**[3]

- ☐ **Kangaroo™**[4]

- ☐ **Dig Dug**[5]

- ☐ **Galaxian**[6]

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down with the stick, while pushing it to the left or right slows you down or speeds you up, respectively. Also, as if maneuvering around the screen wasn't challenge enough, you must contend with missile-firing tanks, deadly warheads, air mines, meteors and something that looks like a swarm of falling raisins. If anything whatsoever comes into contact with your chopper you lose one of your lives.

A fuel gauge is posted at the bottom of the screen, and it steadily drops as you consume fuel. To replenish your supply, you must hit a fuel tank, a number of which are nestled in hard-to-hit areas on the screen. Each 1,000 miles your progress is shown, and you are granted a full tank of fuel.

This game is tremendously challenging. What with the variety of colors and the constantly changing landscape, *Super Cobra* contains not one shred of boredom. However, the one area in which *Super Cobra* really shines is screen graphics. The blue 'copter is beautifully animated, whirling blades and all. The mountainous landscape is not the least bit chunky, and the pulverizing dust-filled explosions are some of the best I've ever seen. The detail is magnificent; you can see the curves on the warheads and the rough-edged turrets of the tiny yellow-green tanks. Even your bombs look good—instead of simply being dots, they are tiny triangular missiles.

Overall, this game has everything going for it. It is destined to become an even bigger hit than the arcade version. For all Atari owners, *Super Cobra* is a must-buy.

During the meteor swarm hug the ground, rising only to avoid tank shots.

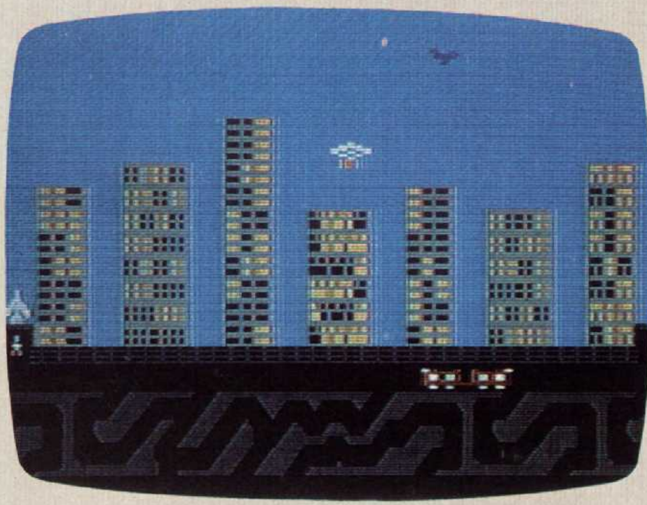
SAVE NEW YORK 🕹🕹🕹

Creative Software/Commodore 64

By Charles Ardai

We've got some good news and some bad news: The good news is that Earth has finally made contact with extraterrestrial life. The bad news is that the aliens want to take over a certain major metropolis, namely New York City. The game is *Save New York* (some would argue that it's beyond saving) by Creative Software.

In *Save New York* you play the Big Apple's last defender, going into battle against a horde of aliens whose sole purpose is to enslave the entire population of New York. You do battle from a white jet which has an unlimited amount of ammunition, but a tremendously limited amount of fuel. Your battle takes place on one screen (about a city block) which contains nothing but a few skyscrapers and a cross section of N.Y.'s infamous subway system.



You begin each game with three lives, which you are destined to lose either by crashing the plane or being run over while in the subway tunnels. All of the aliens are vulnerable to your shots, and so, strangely enough, are the skyscrapers. Even more strangely, you don't lose points for taking chunks out of your own buildings, so by all means blast away—it means more room to maneuver in.

Periodically another plane swoops in and drops a tiny parachuted package. If you manage to catch it, your fuel tanks get filled up. If you don't, it won't be long until you die from lack of fuel. To further complicate matters, in the higher levels of the game the aliens start laying eggs in the subway tunnels. You must destroy them, preferably without getting yourself run over in the process.

Without a doubt, *Save New York*'s visuals are very good. Your plane, the aliens, the parachute, the skyscrapers all look healthy and realistic. The game makes full use of the C-64's enormous graphic capabilities. The subway cars move very slowly and look outdated, but since that's the way it is in real life, too, I can't complain.

Everything is good about *Save New York*, but something's missing. Maybe it's that there is only one unchanging screen. Maybe it's that we've all seen so many "shoot-the-aliens" games that yet another fails to excite us. Maybe it's that there are no Sabrett hot dog vendors next to the skyscrapers. I don't know, it's just that something is missing.

Save New York won't make any headlines; it's nothing new. But it's still good for a few hours of solid entertainment.

Go after the parachutes. They are more important than shooting a stray alien.

TAC-2™. It stands for Totally Accurate Controller, and it means it. With most joysticks, you can't feel your move until it's too late. With TAC-2 by Suncom, it's like your hand is part of the game. TAC-2 has tactile feedback — feedback you can feel. It also has an extremely tight reaction time, a short throw distance and right and left hand fire buttons to keep you a step ahead of the game.

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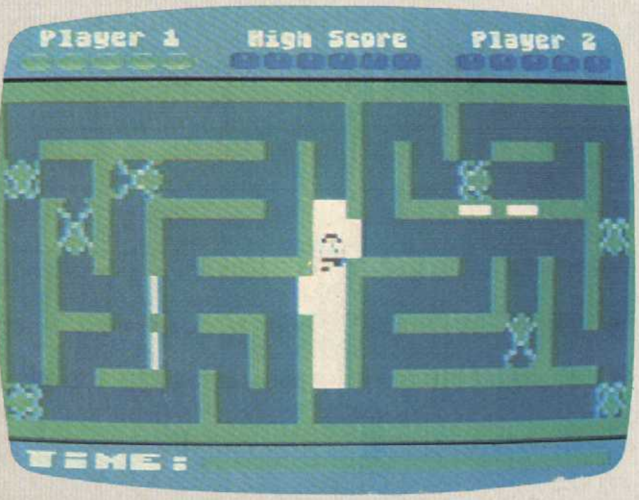


PREPPIE/PREPPIE II 🕹🕹🕹

Adventure International/Atari 800/1200

By Shisha "Patsy" van Horn

Dear Mummy and Daddy,

I just had to take time out of my busy Vassar social schedule to tell you about *Preppie* and *Preppie II*. They're really the hoots! Muffy and I discovered them while we were waiting for our Topsiders to dry after the crew race. Finally, video games *we* can enjoy.

Wadsworth Overcash lost his prep social status at a freshman initiation ceremony, the poor dear—he obviously doesn't have the stamina of *our* family. In the first game he has to retrieve golf balls to get it back. Can you imagine! And then he's forced to paint floors in the second game. Oh I would just d-i-e *die*!

Preppie is like *Frogger* in khakis. Poor Wadsy has to dash across the fairway, avoiding nasty lawnmowers, golf carts and bulldozers. He even has to cross a river to pick up the balls—and no yacht! There's just no rest for him. This whole ordeal is so traumatic that he can only carry one ball at a time.

And the worst of it is that they set a time limit on each level—if time runs out, Wadsy goes to that Big Country Club in the sky. You only get three chances so you have to move fast. If Wadsy gets hit by something on the fairway, he just flattens out as thin as a $100 bill, Lacoste shirt and all.

The directions said there was a surprise obstacle on the tenth (and final) level, but I never made it that far. They also said that you could begin at whatever level you want by pressing the number and then the START, but that didn't work. They don't expect me to *work* to get to that level do they?

The Nasty Nine golf course isn't the end of poor Wadsy's problems. In *Preppie II*, he is forced to paint floors by the same groundskeeper that made him retrieve golf balls. At least the colors are prep—Madras pink, powder blue, lavender, peach and chartreuse.

There are five levels to this game, and once again you are supposed to be able to start on any level, which you can't. They really don't expect *us* to start on the same level as everyone else, do they?

On each level, there are three mazes. Two of them have "huge radioactive frogs" (yuck!) and one of them features the golf carts and lawnmowers from *Preppie*. The mazes with frogs feature revolving doors *a la Lady Bug*. And when you enter or reenter a maze, all of the obstacles reset, so once again the odds are stacked in our favor.

Wadsy's only means of protection is a cloak which makes him invisible. You should use this sparingly though, because you get bonus points based on how much you have left at the end of a round.

As in *Preppie*, you get one free Wadsy for every 8,000 points. There's no time limit, though, and there's even a pause if you want to run out for a polo match.

The graphics could have been better (you can't even recognize the croc on his Lacoste), but the music makes up for it. You can hear "Peg O' My Heart," "Ida," "Humoresque" and "Strolling Through the Park," to name just a few.

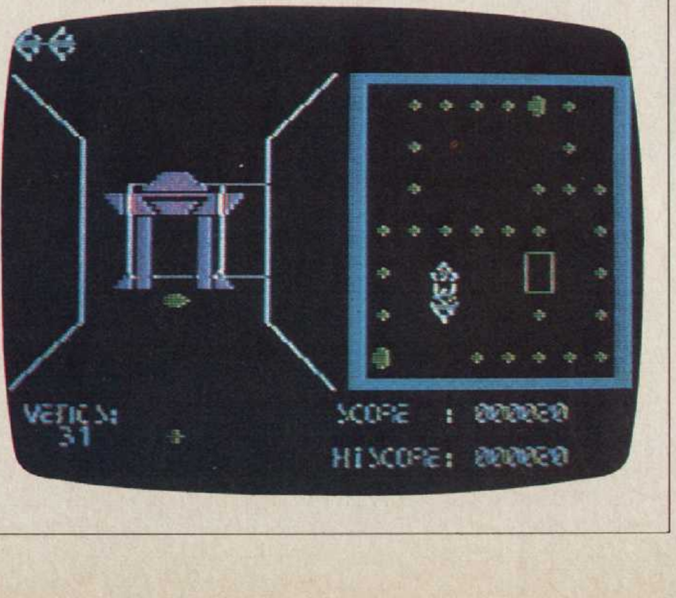
In PREPPIE II, use the expertise Mummy taught you with Gucci's revolving doors on the frogs. In the second maze, living in the fast lane is great, but not here—get behind slow moving vehicles to paint.

SPECTRE 🕹🕹

Datamost/Apple

By Michael Blanchet

No matter how you dress it up, a maze game is still a maze game. Storylines and titles mean nothing. The bottom line in any maze game is the same—move through the corridors and collect whatever series of objects lie in your path. Once this is done you'll find



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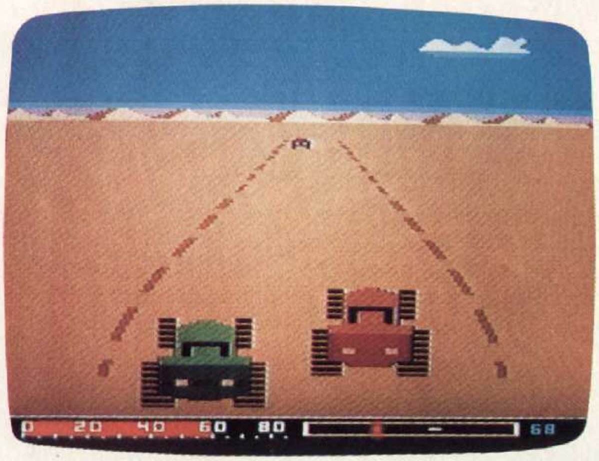

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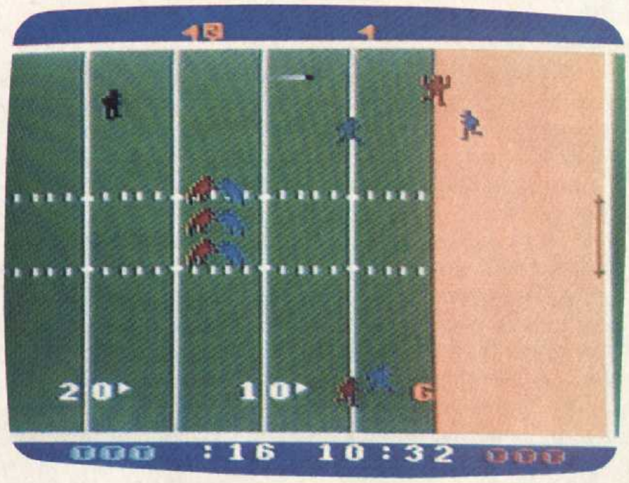

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yourself in yet another maze with a fresh set of whatever and more monsters to avoid. And although they would like you to think otherwise, Datamost's *Spectre* is just another maze game.

One thing I will say for *Spectre* is that it is not cute. This in itself is a welcome change of pace, but it is not enough to redeem a game that follows in the wake of thousands of similar contests.

The instruction booklet begins with some silliness about a disabled space station. It seems that you are the only chap left on board and at this very moment a band of Questers, the most ruthless life form in the galaxy, is moving in for the kill. To seal off the vessel level by level you must move through the various corridors and lock down each and every open space port. As we speak it is already too late, for a few of these beasts have penetrated your defenses.

As you move from port to port you must avoid the Questers. You have at your disposal two weapons with which to defend yourself. The first is an energizer. Touch it and you can safely confront any Quester you may encounter until its powers wear off. If there are no energizers close by you can always opt for the teleportation chamber. Once inside its walls you are beamed to the position you held at the beginning of the round. Think of it as predictable hyperspace. When all the space ports have been locked down, a jump into the teleportation chamber will place you at the next level.

Spectre offers two simultaneous displays. One shows an overhead view of the maze. The other is a first-person representation of what you would see if you were standing inside the space station. The first-person screen is, for the most part, useless. It does, however, offer some assistance later on in the more advanced levels of the game.

In the novice game the walls of the maze disappear from view five seconds after the game begins. By committing the layout to memory (believe me, this isn't very hard), one can easily remember which path to take and which to avoid. Hence, there is no need to refer to the first-person screen except, of course, if your memory fails you.

It seems to me that the first-person screen was thrown in not only for cosmetic purposes, but also to capitalize on the recent popularity of the first-person maze game. Its inclusion adds little or no appeal.

All maze games are infinitely more enjoyable when played with a joystick. *Spectre* is no exception. If you don't have one I suggest toggling the action definitions according to the instructions in the same booklet. My only other advice is to try before you buy. This is run-of-the-mill stuff.

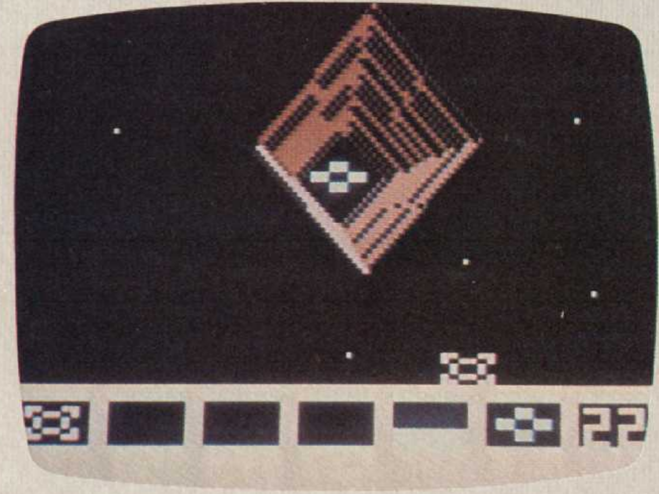
Use the teleportation chamber to escape the Questers when all your energizers are depleted.

LIFESPAN

Roklan/Atari 400/800/1200

By George Kopp

Games that rely on a nifty scenario usually disappoint. In the case of *Lifespan*, though, the scenario is so off the wall that I have to give Roklan credit. *Lifespan* is a cradle-to-the-grave journey, in which you must conform your Opportunities to your Character Type, become accepted by your fellow beings so that you may engage in Conversation, and finally avoid Doubts, Worries and Fears while pursuing Hope.



Lifespan is four games in one, and its nicest feature is that you can begin your journey on any level, or in other words, choose to play any one of the four games. It opens with a Birth Sequence—really just a kind of title screen. Getting born, as we know, takes no skill on the part of the infant.

The fun begins in the Playpen sequence. Here the object is to trap as many Character Types as you can with a set of building blocks. The Types behave pretty much like balloons, and the instructions warn you that you'll be clumsy owing to your extreme youth. That's an understatement. The balloons have a nasty habit of escaping even when you've built a Fort Sumter of blocks around them.

Oh well. Next you're on a journey through the Gates of Opportunity. Opportunities look like Character Types, and the idea is to match up your Type with the right opportunity and maneuver through the gate. This is all very easy.

The most interesting segment follows. You must enter into Conversation with other beings who would rather have nothing to do with you. The playing field is not a cocktail party but a grid. As you travel the grid, squares will light up. These are Common Interests, and

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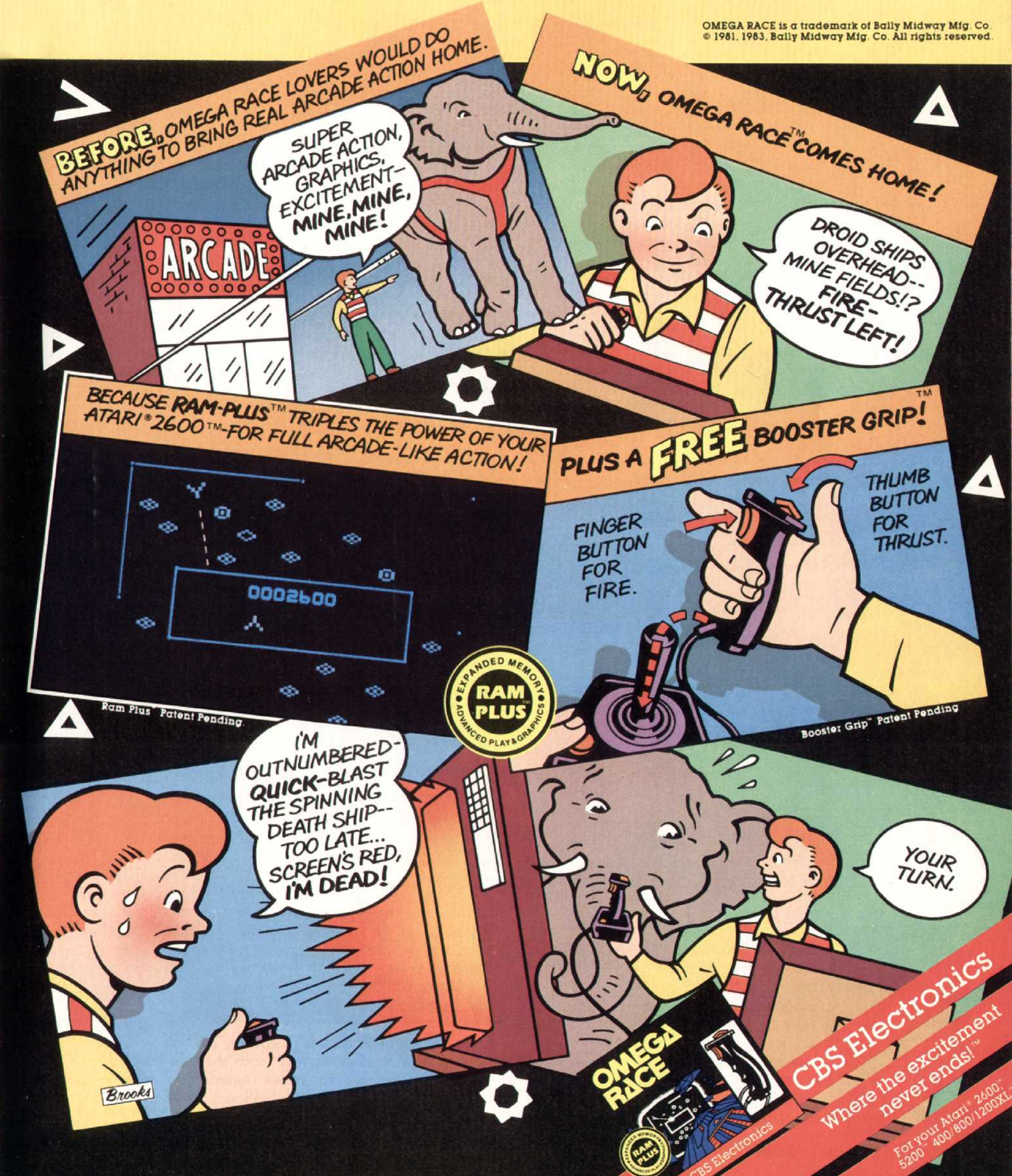
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the more common interests you bone up on, the more Glittering your Conversation. (Pardon the capital letters—these are all technical terms in *Lifespan*.) When you are totally Glittering and can fascinate even Dick Cavett on subjects ranging from oil depletion to Stravinsky, you may enter a Conversation and wow the pants off everybody.

Off you go to the Corridor of Experience. From high-toned chit-chat you emerge into a typical shoot-em-up. Racing down a tunnel you've got to avoid what look like pieces of soot (Doubts, etc.) and smash into what look like pieces of paper (Hope). Reach the light at the end of the tunnel and you go back to the Gates of Opportunity.

It's a little too bad Roklan didn't work on that Conversation game and chuck the rest. As it stands, *Lifespan*'s gameplay doesn't quite live up to expectations (or Expectations). I think it will have a lot of fans, though, and if you're looking to buy your shrink a birthday present, consider it.

Keep to the walls in the Corridor of Experience. You'll have a better chance of avoiding Doubts and Fears, and who knows, you might find the bar.

STARBOWL FOOTBALL

Gamestar/Atari 400/800/1200

By Phil Gerson

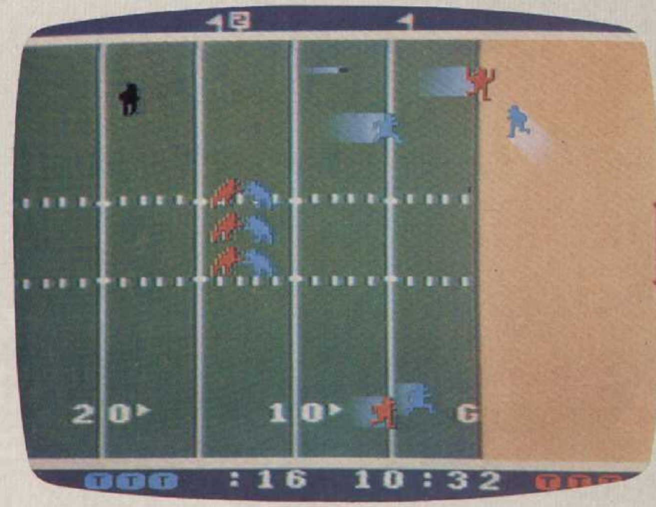
Starbowl Football may be the most realistic football video game available for home systems. It features excellent scrolling graphics, a full 100-yard field, 196 offense/defense play combinations and such non-planned occurrences as fumbles, interceptions and penalties and offers both two-player and one-against-the-computer versions.

The offensive player has full control of the quarterback and can independently program four pass patterns for two wide receivers and four blocking actions for his four-man line. While passing is the name of the game, the quarterback can pick up five to seven yards on a well executed run. The defender has direct control over a roving linebacker, four pass defense options for his left and right linebackers and four options for the linemen. On a rushing play the computer automatically sends the programmed pass defenders after the ball carrier.

The display provides an authentic representation of the playing field and the players are reasonable graphic representations of human beings. An especially nice touch are the computer-called penalties for pass interference, offside and delay of game. They can keep one player from gaining an unfair advantage without detracting from the game. Another realistic touch is the ability of either player to call time-outs. As in real football, this can help overcome the limitations imposed by the clock. A shortcoming is that time out cannot be called until both teams are in the huddle. As it often takes several seconds before they return to this position after a play, the effectiveness of calling time-outs near the end of a game is severely reduced.

Fumbles, however, can be irritating. A player can be on a good scoring drive when suddenly a fumble is called for no apparent reason. Another sore point is the missing of field goals and extra point attempts. The player has no control over kicks and the computer decides seemingly at random whether or not the attempt will be good. This often has little relation to field position. A team can miss at 10 yards and make the next attempt at 40 yards. On the other hand, long-time New York Giants fans, at least, will find this realistic.

While the offensive player controls the quarterback, the computer controls the pass. Once thrown, the ball automatically heads for the designated receiver. The expertise that's required is in the catching. To complete a pass you must press the fire button on your controller at the precise instant the ball hits the receiver. A split second too early or late and the pass is incomplete.



The player programmability gives this game the kind of head-to-head strategy that every armchair coach will love, though its faults tend to make it an exercise in luck and precise button-pushing. Even so, *Starbowl Football* is fun. The only secret to successful play is to out-think and out-practice your opponent, and yes, you can out-think the computer.

On running plays or pass receptions, the ball carrier goes out of bounds when his feet touch the side lines, so stay near the top of the screen where you have more maneuvering room.

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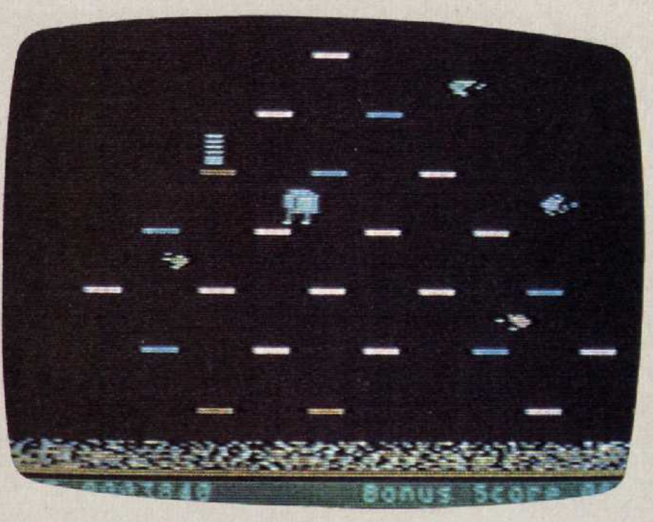


MR. COOL 🕹/

Sierra On-Line/Atari 400/800/1200

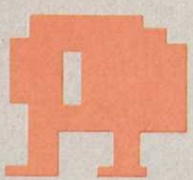
By William Michael Brown

I've really go nothing against cloned games in principle—true originality is a gift from heaven, after all—but *Mr. Cool* is a clone only its cluster-mother could love. The one justification for making clones is that you can't get—or can't improve on—the original any other way, right? Then why clone the inimitable *Q*Bert* for Atari computers, when Parker Brothers already has the original coming out not only for Atari, but for the VIC-20 and Commodore 64 computers as well? And if you must make one anyway—to catch your share of the lucrative *Q*Bert* market, natch—why make one so obvious, boring and internally inconsistent?

Those three adjectives just about sum up *Mr. Cool*. The star is an ice cube (cube, Q*Bert—okay, you don't need me to draw you a diagram) caught in a pyramidal (check) structure of hot plates suspended above the mouth of a roaring furnace. His game: Chill out all the hot plates by hopping (check again) from plate to plate until they're all the same color as the playing field's top border. He starts with four lives, and is up against a very short time limit, hot springs that come bouncing along behind him, and fireballs that whizz through the pyramid from the sides. Either of these last two will melt the cube if they touch him, but he's got a secret weapon that turns the tables: Super Cool Time. Press the joystick button and Mr. Cool turns into Cryogenic Charlie, able to turn fireballs into snowballs, hot springs into limp slinkys, and absorb both of them (for extra points) with one or more bounds.

Okay, class, now that we all know who Mr. Cool *really* is, can anyone tell me why he consented to appear in such a lame game? F'r instance: Why do the colors of the plates have apparently nothing to do with how hot they are? You'd assume they'd start out with a warm color (red, pink, etc.) and turn a cooler color (blue, green, etc.) as Mr. C cools down. No such luck—at least, not all the time. Why can't he jump *off* the pyramid—a danger that added lots of spice to that other game? Why no lovable chipmunk cursing—or something equally charming—when he fails? Why are all the sound effects and nearly all the graphics so Basic Game Design 101 textbook simple? Why is this just a game about a cube that hops around a pyramid, when *Q*Bert* managed to be a game about a quirky, foulmouthed little hosenose who keeps trying to make his way in a world right out of an M.C. Escher painting?

The key, as Rod Serling used to point out, is imagination. To be fair to the designer, he *has* come up with one brilliant piece of imaginative graphics: Mr. Cool melting. And to be fair to Sierra, they aren't the only people making *Q*Bert* clones; they just haven't made a very good one.



Try not to use your Super Cool Time until the screen is full of fireballs; it's just too tough to get your bonus otherwise.

AQUA RUN 🕹🕹🕹/

Soft Spot Micro Systems/IBM PC

By Corey Olfe

If *Jaws* kept you out of the water for a week, *Aqua Run* will keep you out for the rest of the year. In *Aqua Run* you are a scuba diver searching for sunken treasure in an ocean which, depending upon the skill level, is a grid of 4 by 4 to 64 by 64 screens. In the ocean there are hordes of sharks, eels, octopi, manta rays, etc. (even killer seahorses!?!) along with randomly scattered treasure chests. If you should happen to run into one of the beasties, you will lose some of your precious life points.

Your only defense against these creatures is a speargun that shoots four ways, with a limited number of shots. And you have only a short time to find a treasure before your air runs out. The only way to replenish your air supply is to drop the treasure off at the surface. This also gives you extra life points and more spears. The deeper you find the treasure, the more air, spears and life points you receive.

The ocean is more of a maze than anything else. There are many impassable walls which, according to the instructions, "give the effect of caves, ledges and passages in the underwater world." Finding your way up from the deepest levels of the ocean can be quite a chore without a map. Since the landscape and treasure placement change with every new game, you may end up spending much of your playing time drawing maps.

Aqua Run can be played from either the keyboard or a joystick. The keyboard takes a little getting used to, but it can soon be mastered.

When you are in the seaweed about to pick up a treasure, start moving up just before picking up the treasure. If you do this the treasure will not weigh you down.

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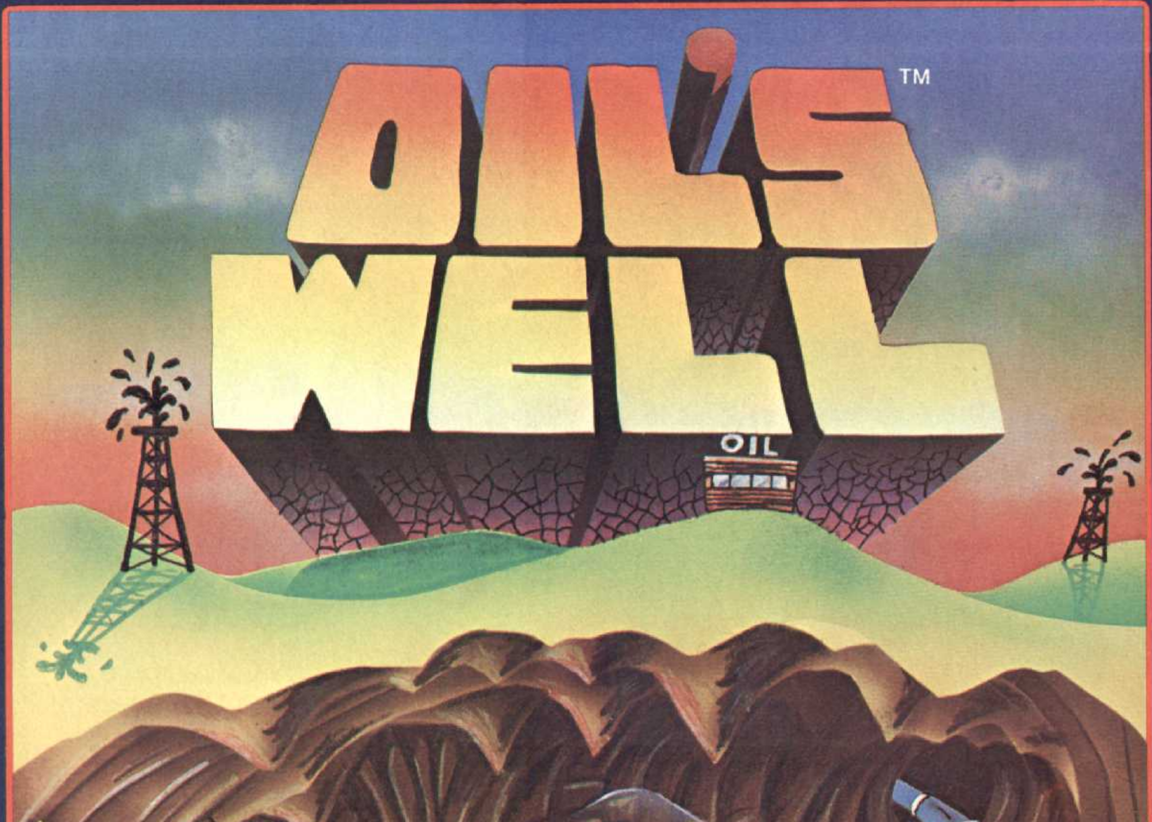
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COMPUTER

1. ZORK I (Infocom)
2. ZAXXON (Datasoft)
3. FROGGER (Sierra)
4. CHOPLIFTER (Broderbund)
5. TEMPLE OF APSHAI (Epyx)
6. DEADLINE (Infocom)
7. FORT APOCALYPSE (Synapse)
8. JUMPMAN (Epyx)
9. MINER 2049er (Big Five)
10. ZORK II (Infocom)

The arcade Top Ten courtesy of REPLAY MAGAZINE. The computer Top Ten courtesy of SoftSel. The home games Top Ten is the result of a nationwide poll. (A) stands for Atari, VCS, (I) for Intellivision, (AA) for Atari 5200 and (C) for ColecoVision.

Computer Top Ten courtesy of Softsel

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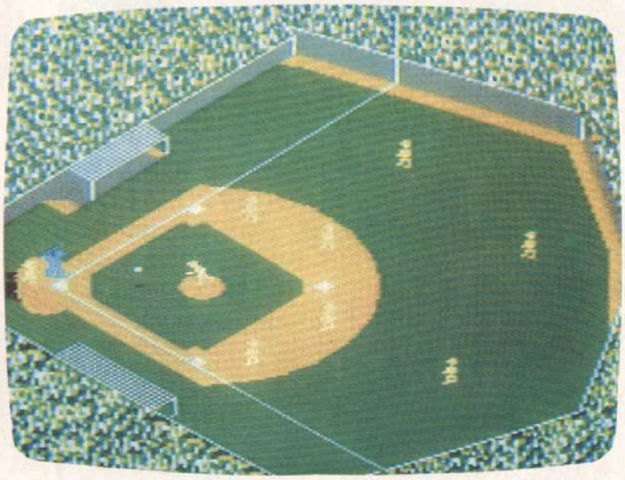

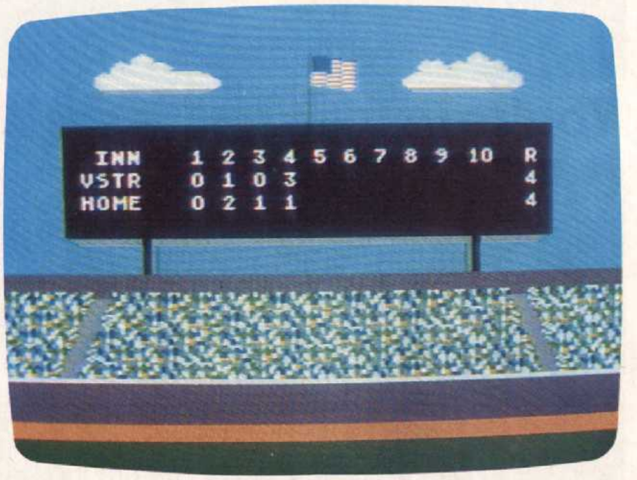

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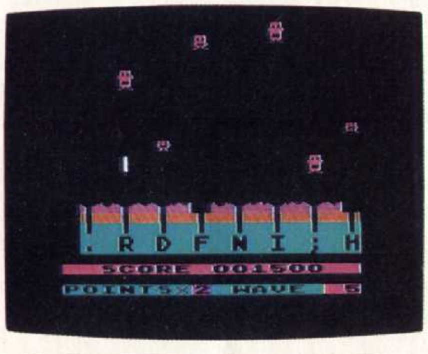

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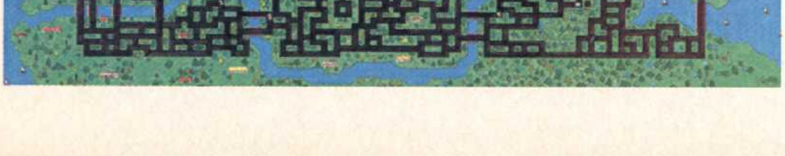

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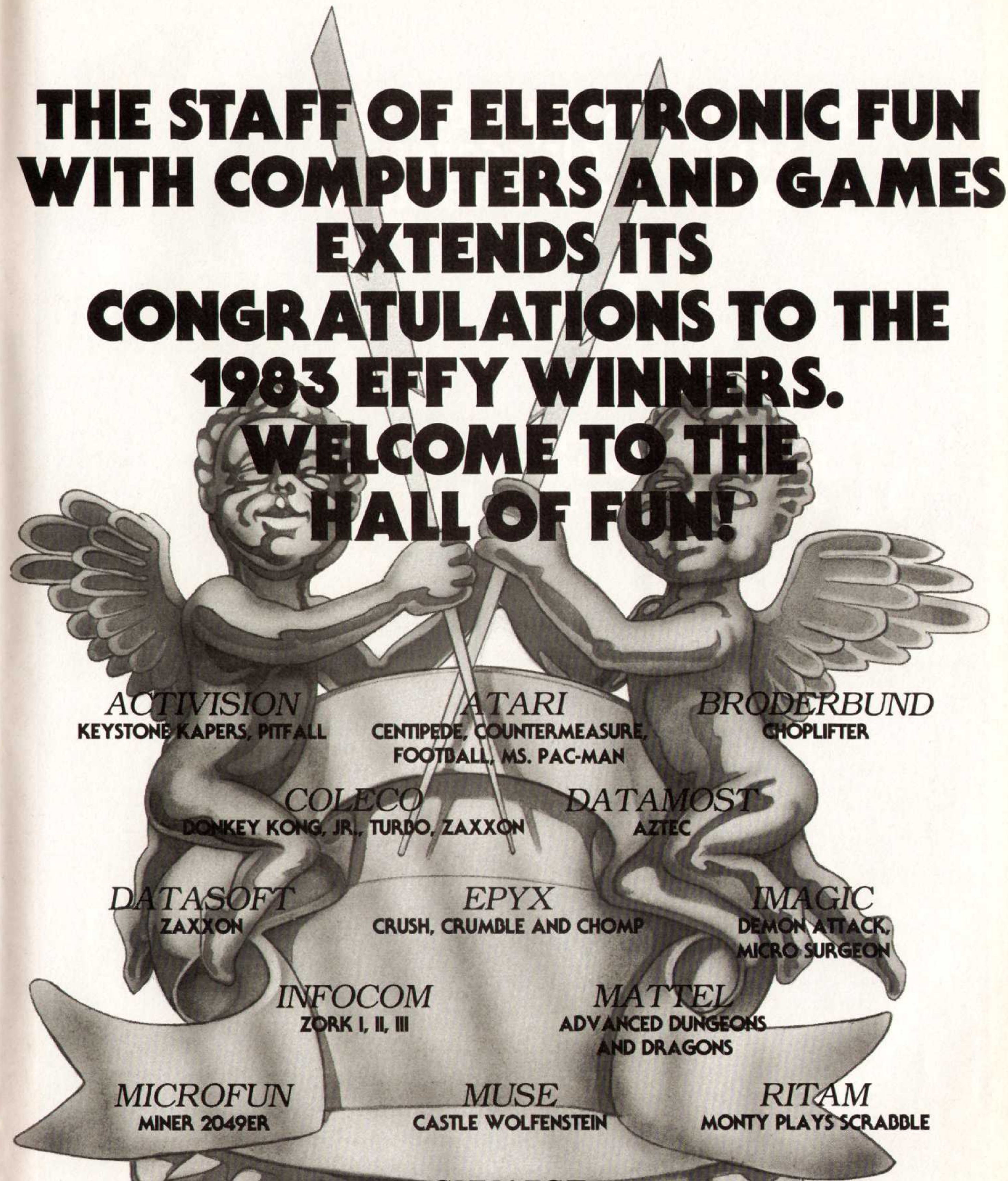

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PHIL WISWELL'S GAMEMAKERS

MOON DUSTER

Jaron Lanier, maverick designer of notes

Jaron Lanier likes games that start with the letter Q because, he says, "they tend to be better than games that start with other letters." He was involved in Manhattan's experimental music scene and he and his father spent five years building one of the strangest abodes the New Mexico desert had ever seen. The outcome of all this diversity is the offbeat game Moondust *from Creative Software.*

Interview by Phil Wiswell

EF: Where did a musician learn to program computers?

JL: Well, it's a funny story that not many people know. Basically, I lied about jobs and got into things I shouldn't have been into, but I was able to learn fast enough to cover it up. I've just been doing that with this ladder effect of getting me higher and higher to the point where now I am very good at it!

EF: You did your first game programming at Epyx on ALIEN GARDEN. How long did you stay with Epyx?

JL: About a year, then I went freelance. Epyx convinced me that I don't want to be part of *any* company.

EF: What was the atmosphere like?

JL: Some wonderful people—all the people in R&D were tremendous—but the rest of it was totally confused. There was so much politics that every week you didn't know what was going to happen.

EF: Where did you get the idea for MOONDUST?

JL: There are a lot of different parts of *Moondust* that come from a lot of totally different places. Basically, I wanted to create a game that people would want to play because it was beautiful to look at and beautiful to listen to.

EF: Did you pick the Commodore 64 for MOONDUST because of its musical abilities?

JL: Absolutely. There's only one home computer with a good sound chip right now—the 64. On the Atari, if you use all four sound channels, you can't really get them to play in tune enough for the kind of music I'm doing in *Moondust*. I'm doing all kinds of chord modulations and you have to really have the notes in tune so that they will hold together. You *can* do that with the Atari, but then you only have two voices.

NEW-NOTE
MOT-BAS
THIS MOMENT
TONIC (FS)
ACTUAL

Photos: Janet Freize

EF: Is that why MOONDUST is only being done on the 64?

JL: Creative Software is probably coming out with a VIC-20 version as well as doing other translations. I'm doing the music on them but, quite frankly, I don't think the music will translate that well. After all, the C-64 has an excellent music chip. The guy that Creative has doing the translations is very good and what I've seen of the graphics and gameplay so far is excellent. Still it's not the original so I'm trying to see if I can get the name changed to *Essence of Moondust* or *Moondust Extract* which would indicate that it's slightly different than the original game which I wrote for the C-64.

EF: Why has the use of sound in video game design been relegated mostly to the sidelines, secondary to the game itself?

JL: The arcades have the real technology, but with the noise there is no point to sophisticated sounds. You just hear a few beeps and blips. The whole sound jungle that arcades create is wonderful, of course, and that's what got me interested in games in the first place. But you couldn't hear any of the individual games, and since all of the early home video games were copied from arcades, they took off in the same direction.

EF: How big is the MOONDUST program?

JL: I don't know how large the VIC program is, but on the 64 there are about eight bytes free—not much! There's so much stuff in there: you have all the trigonometry for the target, all the music improvisors....

EF: Did you create everything? Music, graphics, program?

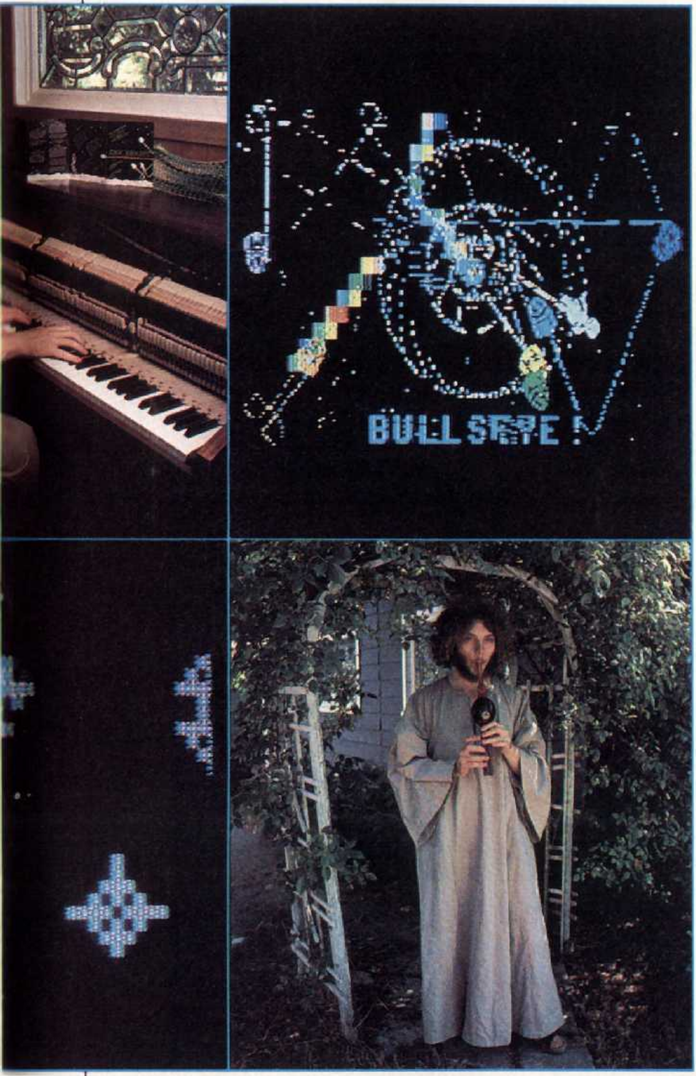
JL: Yes.

EF: In what time frame?

JL: It's hard to remember. I know I started around the first of the year and finished sometime in the summer. Making a game takes a very serious amount of work and you have to be willing to go for many, many hours without sleep to get one written in any reasonable time at all.

EF: What are the tools of your trade as game designer?

JL: Mostly intelligence, in the sense that the CIA has an intelligence network. For example, I had to pirate the assembler I did *Moondust* in, because it wasn't possible to get one at the time. It had bugs in it, and I had to work with other people to figure out how to fix it. Keeping contacts is probably my most important tool. Sometimes I have to borrow equipment and I'm always lending things. Game designers are always helping each other out.



EF: But what equipment do you use? You don't just sit down with a piece of paper and a pencil and write out your game, do you?

JL: Sometimes I do. I tend to write in restaurants. Most of *Moondust* was written in three Palo Alto restaurants: The Seven Seas Chinese, the Sinan Chinese and the University Creamery. People have found clothing in their soup there, but it has good lighting and it's good to write code in. What I'd do is write code in the morning for several hours, then go home and see if it worked.

EF: I expected MOONDUST instructions to say "skip the rules...try a game...experiment." Why didn't you take that approach instead of the one you took?

JL: One thing everyone disagrees with me about is the idea that you have to be able to tell immediately how to play a game, that it should be intuitively obvious. Even Electronic Arts, which is so progressive in a lot of other areas, has this idea. And I think that's really counterproductive to what game playing and computers are all about. Making minds lazy is okay in isolated incidents, but the basic idea should be to enjoy learning. You learned to play chess, didn't you? There was nothing intuitively obvious there. People have this picture of the computer as a laborsaving device, and I think that's off the wall! It's great to learn how to do things yourself. It's exploration. So I like the idea of having people learn the game, read the rules, so I tried to make the rule book as attractive as possible.

EF: Do you want people to stretch, to reach for the objective, rather than hand it to them?

JL: It's not me that *wants* that. It's me that has experienced that and thinks it is great. I wanted to make a game that I would like the best.

So this is the game, *Moondust*.

EF: Do you play MOONDUST?

JL: Oh yeah. I play it all the time.

EF: That has not been true of most designers when they finish a videogame.

JL: That was my challenge. I kept telling myself I wanted to make a game that I will want to play with for years. I wanted a game that I could go back to when I was 60 years old and say, "I'm really glad I did this at that age."

EF: Which variation do you play?

JL: I like the one where there's no death, no scoring, no writing of any kind on screen. It's very much this free, open, relaxing experience that I sometimes call the "art mode." Totally noncompetitive—that's my favorite version. The great thing about software is that you can have all these different modes and the person can decide which to play.

EF: As game designer, you create an unlimited number of scenarios that we must play to one conclusion. It's up to us to create them.

JL: Or in the case of *Moondust*, to create the music. There are two extremes I could have gone to in the music. One is that you could make the music anything you wanted it to be—any note, any sound—in which case most people wouldn't have made very interesting music. The other extreme, basically what most games do, is to have the same

Continued on page 97

Composer/game designer Jaron Lanier at the keyboard and playing two oriental flutes from his collection of exotic instruments. Top left and right are two screens from the ever-changing MOONDUST from Creative. Bottom center, ALIEN GARDEN which he helped create for Epyx.

COMPUTER WORKOUT

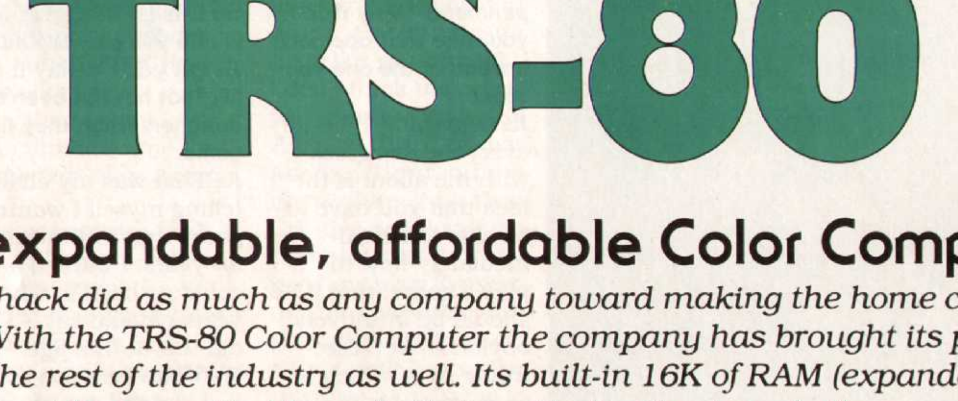
Color me TRS-80

The expandable, affordable Color Computer

Radio Shack did as much as any company toward making the home computer popular. With the TRS-80 Color Computer the company has brought its prices into line with the rest of the industry as well. Its built-in 16K of RAM (expandable to 32K) and a wide array of add-ons, both from Radio Shack and other manufacturers, make the Color Computer a versatile machine, useful for novices and serious programmers alike.

By Jules H. Gilder

The TRS-80 Color Computer is a powerful and versatile computer considering its low price of $199.95. But it wasn't always so. When it was first introduced, about two years ago, the Color Computer only came with 4K of RAM and it cost $400. Gradually, Radio Shack began to upgrade the capabilities of the machine by first allowing you to increase memory to 16K and then adding Extended BASIC. But for a computer that uses the powerful 6809E microprocessor, it was like having a Ferrari but driving it only in first gear.



To the right, the TRS-80 Color Computer itself. Above two games: SHOOTING GALLERY and MEGA-BUG.

Support for the machine was limited and if you didn't write your own games in BASIC (there was no assembler available either) you were stuck with what Radio Shack and a handful of mail order houses had to offer. Radio Shack eventually came out with a cartridge-based assembler, but it was only good for use with tape systems. Since it plugged into the same slot that the disk drive did, you couldn't use both of them together.

But hobbyists pushed the machine further. They figured out how to increase RAM to 32K, and eventually the Shack did too. That was the turning point. When Radio Shack came out with their 32K upgrade, they decided not to use 16K RAM chips, but to use 32K ones instead, reducing the total parts count required and avoiding a major reworking of the printed circuit board inside the computer.

Many of the hobbyists who had Color Computers knew that there was no such thing as a 32K RAM chip—there were only 16K RAMs and 64K RAMs. Upon closer investigation, they discovered that the 32K RAMs were really half-bad 64K RAMS. As chip manufacturers learned how to

Radio Shack
TRS-80
COLOR VIDEO
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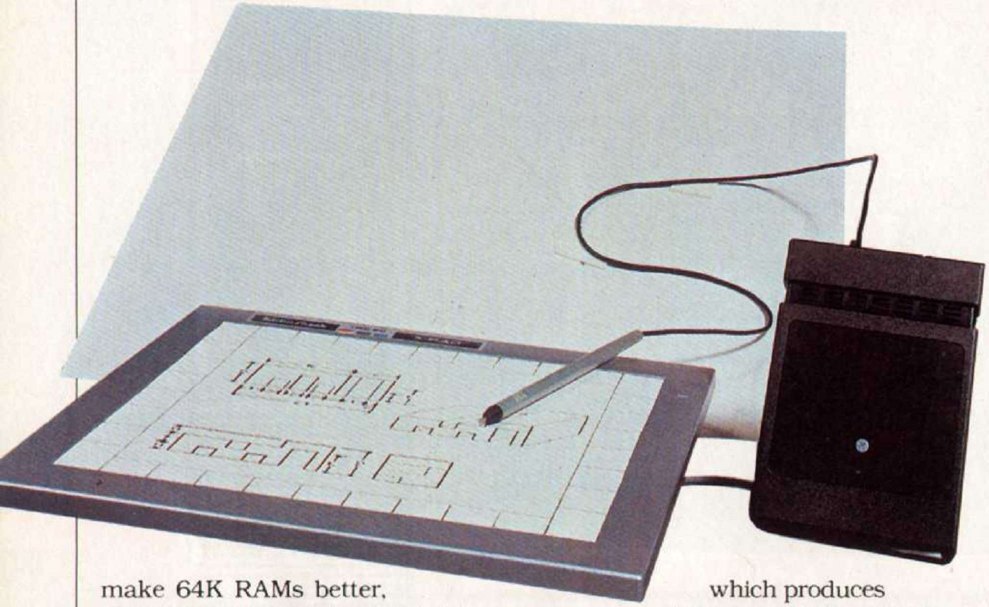
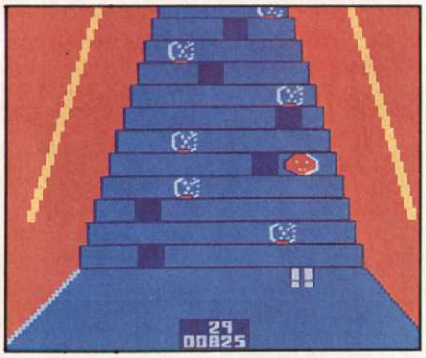
COLOR COMPUTER
BREAK



make 64K RAMs better, these were replaced by good 64K RAMs. Hobbyists then figured out a way to use this extra RAM, and all of a sudden powerful tools and operating systems became available for the Color Computer. It was no longer a hassle to write assembly language programs for the Color Computer, and the quantity and quality of games increased.

Today the basic Color Computer comes with 16K of RAM and is expandable up to 32K. The keyboard is made with calculator-like keys, but unlike so many others of this type they are of hard plastic and make a positive contact when pressed, even on the side or corner. Even though there are no mechanical problems with the keyboard, many people prefer a regular typewriter-like keyboard and several companies have sprung up with replacement keyboards for the computer.

The 8K BASIC that comes with the Color Computer has many features missing, but for $80, 16K Extended Color BASIC can be installed. This is a much more powerful version with many new commands permitting the use of high-resolution graphics directly from BASIC. These include commands such as CIRCLE, which draws a full or partial circle of a particular radius at a specified point, DRAW, which produces lines and PAINT, which fills in specified areas with a specific color. Extended BASIC also has a PLAY command which allows you to add music and sound effects to your programs. With it, you can produce up to 255 different tones. The extra versatility provided by this version of BASIC is a must and really should have been included by Radio Shack in the basic unit.



The graphics capabilities of the Color Computer range from eight colors in a 32-by-64 element format, to one color and a background color in the 192-by-256 element format. In between these two extremes, there are three intermediate formats. In the text mode, the computer normally displays only uppercase letters in a 32-character line, 16-line screen format. However, several adapters and software programs permit the display of lowercase letters and some even double the display width to 64 characters per line.

The Color Computer comes with no video display and is meant to be used with an ordinary color television. An RF modulator (a sort of mini TV transmitter) is built into the Color Computer, so you have to do is hook it up to the antenna terminals of your television set.

If you want to print something out on paper, you can use the Color Computer's built-in serial interface but first you'll have to get a special cable from Radio Shack. The Radio Shack printers that are designed to work with this computer are agonizingly slow and you might want to consider using another brand printer. If you're interested in using the faster and more popular parallel printers, such as the Epson MX-80, you'll have to get a serial-to-parallel adapter, which will cost about $80.

If you want to save your program after hours of long work, you may do so on a standard cassette recorder at a rate of 1500 baud (roughly 150 characters per second). This is one of the fastest rates for saving data onto tape that Radio Shack has ever used, although Apple has been using 1500 baud for years. (Radio Shack recommends that you use their data recorder, but in most cases this isn't necessary.)

Another way to save your programs is to use a disk drive. The first disk drive with the controller will cost you $399.95, down from last year's price of $599. Each additional drive will only cost $279.95, down from $399 last year. This is one area where Radio Shack's pricing seems to have fallen in line with the rest of the industry.

Each drive is capable of storing up to 156,672 bytes (characters) of data on a diskette and up to four

Above left, Graphics Tablet; center, HAUNTED HOUSE and right, color graphics printer.

disk drives can be attached to any Color Computer system, for a total of 626K of disk storage. For those of you interested in the technical details, each unit is a double density drive that stores information on 35 tracks divided into 18 sectors, each of which contains 256 bytes of data.

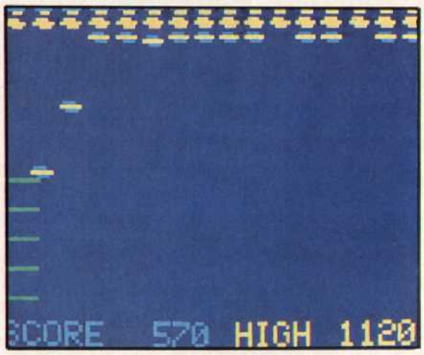
Since the Color Computer is being marketed primarily as a game-playing machine, it's not surprising to find that it has a connector to which a set of joysticks can be attached. The joysticks do not come with the computer, but are sold separately for $24.95. Before you run out and buy them, however, you might want to glance through one or more of the Color Computer-oriented magazines to see what else is available. The joysticks from Radio Shack are not self-centering and are not easy to control. If you are concerned with precision, you might want to purchase another manufacturer's joystick, or even an adapter that will let you use Atari-compatible joysticks.

Radio Shack
TRS-80
PLOTTER PRINTER FP-215

After apparently realizing that a lot of people have spent extra money to add typewriter keyboards and expand the memory from 32K to 64K, Radio Shack is finally doing the same. The just-released 1984 catalog shows a new version of the Color Computer called the Color Computer 2. It features a typewriter-like keyboard and is expandable (from Radio Shack) to up to 64K of RAM. This means that Color Computer BASIC has also probably been modified to take advantage of the additional memory, although we won't know for sure until deliveries of the new computer start. They should be in the stores by the time you read this article. Since the price of the latest version of this computer ($239.95 for 16K standard BASIC and $399 for 64K with Extended BASIC) is only $40 more than the old standard version, we would have to suggest that you wait for it before buying a Color Computer.

Along with the new version of the Color Computer, Radio Shack is making available a new operating system called the OS-9 operating system, which comes with a built-in, disk-based editor/assembler. More interesting than that, however, is the fact that OS-9 supports multi-tasking, which in English means that it can allow more than one program to operate at the same time. This is a feature that is ordinarily found only on much more expensive computers. Also available for use with the OS-9 system is BASIC-09. This is an interactive compiler that takes advantage of the 64K of memory and produces fast programs. Both of these software packages are very aggressively priced at $69.95 and $99.95, respectively.

Another powerful operating system, called FLEX, is also available for the Color Computer, but not from Radio Shack. It, too, comes with a built-in disk-based editor/assembler, and adds a lot of programming power to the Color Computer.



One of the really big shortcomings of the Color Computer in the past has been the way accessories were added onto it—everything used the game cartridge slot. If you wanted to use a disk drive, for example, you had to unplug the game cartridge that was in there and plug in the disk cartridge. This constant plugging and unplugging became very annoying.

After tackling the problem for more than a year, Radio Shack has finally come up with a solution. They now have a cartridge slot expander called

Continued on page 102

Above right, Flatbed plotter/printer; left center, GALACTIC ATTACK and (center right) POPCORN.

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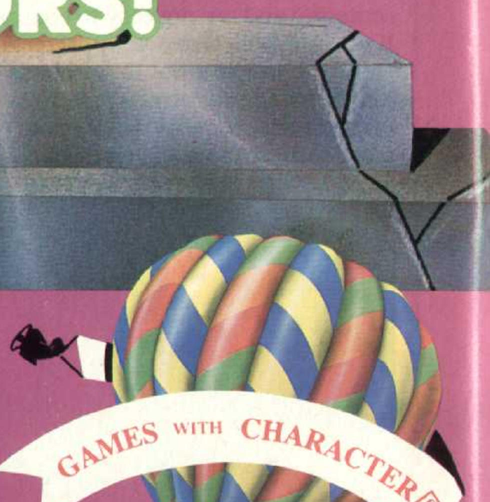
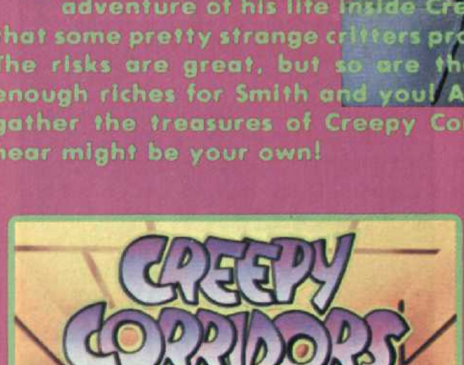

GAMES WITH CHARACTER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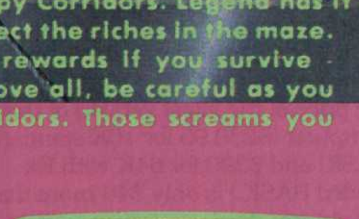
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FIRST SCREENING

COLOR MAZE

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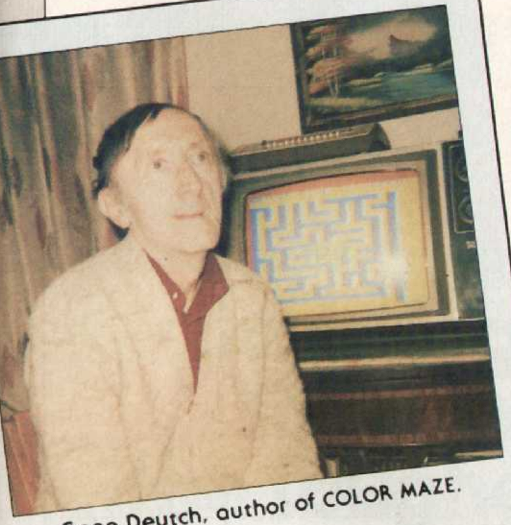
This month's winner is Gene Deutch. Gene is a 62-year-old World War II veteran who, until last year "didn't know a computer from a calculator." Then he bought a VIC-20 and taught himself to program, studying 12 to 14 hours a day in order to accomplish this. His game, Color Maze, *is for one player and works on an unexpanded VIC-20 computer.*



Gene Deutch, author of COLOR MAZE.

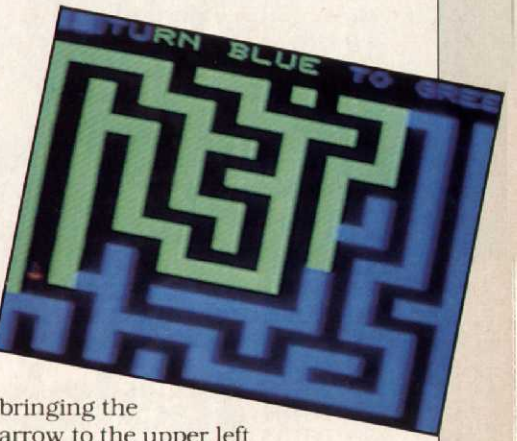
The Game

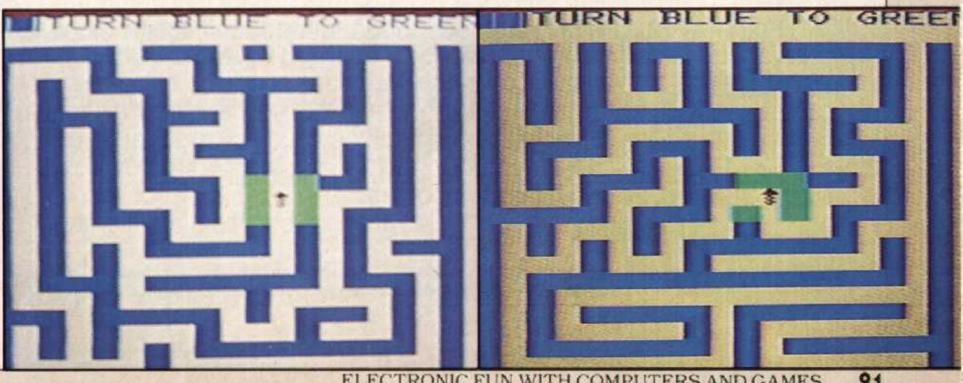
Color Maze is a race against the clock written for the VIC-20. It's a simple game with colorful graphics, and its constantly changing patterns add challenge to the gameplay.

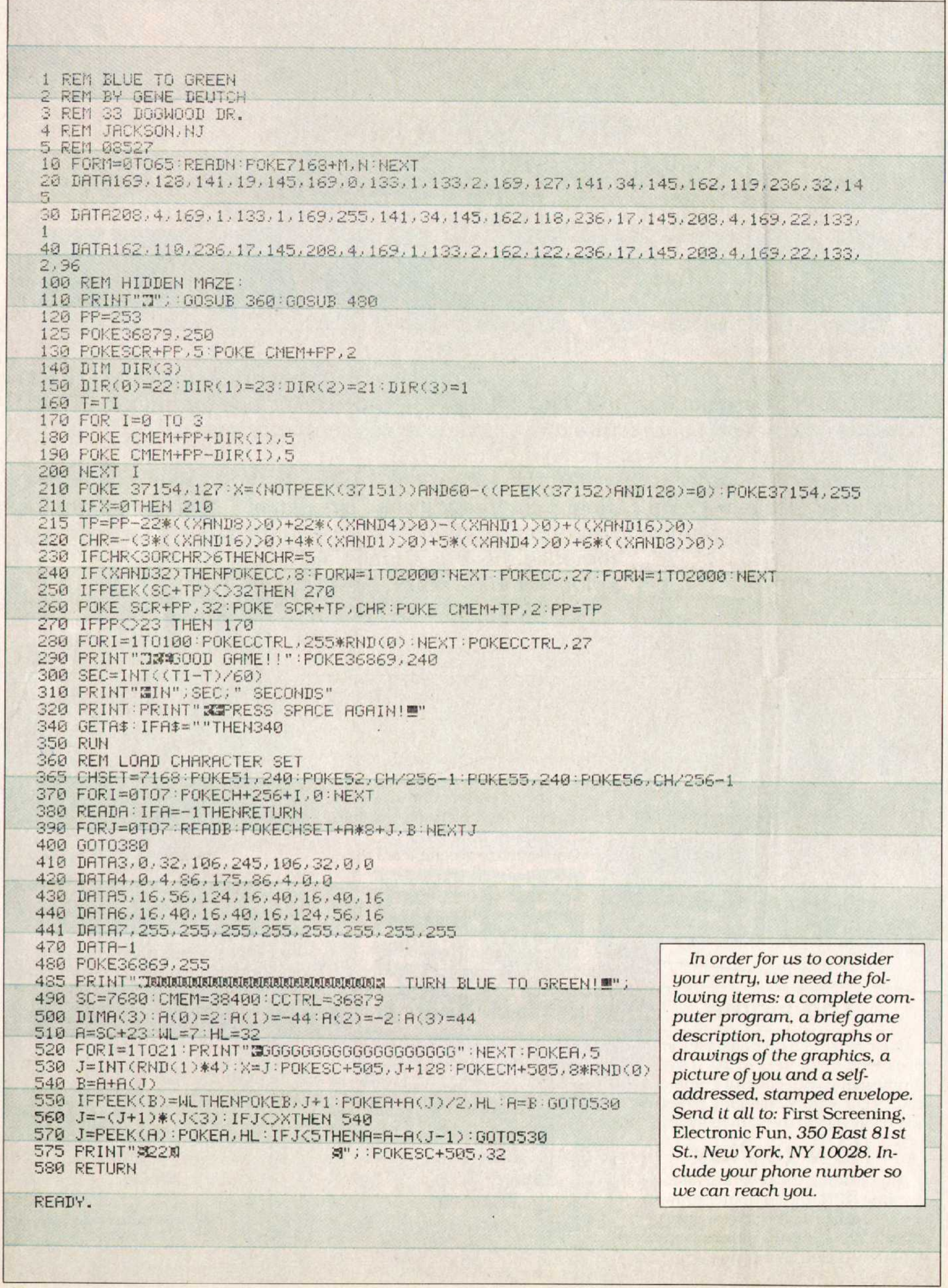
How to Play

After loading the program and printing RUN, the computer draws a random maze on the screen. Every maze it draws will be different. When the maze is complete (signified by a change in the background color) use your joystick to maneuver your man (an arrow) through the passageways. As you go, the background will change from blue to green. Once the entire background has been turned to green, bring your arrow to the upper left hand corner to get your time. Fastest time wins.

Once a maze is completed the computer will automatically draw another one. There are many alternative paths and the less backtracking you do the faster your time will be. Watching the computer draw the mazes is fun in itself, and you can get it to draw a new one simply by bringing the arrow to the upper left without even completing the maze. Your fire button will turn the maze black for a few seconds. With a few modifications of the program you'll be able to change the colors of the mazes or add sound effects.☐



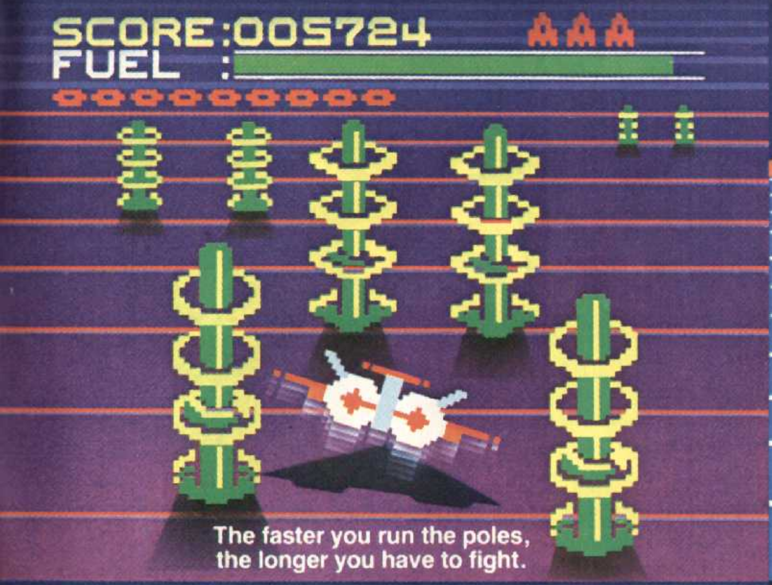




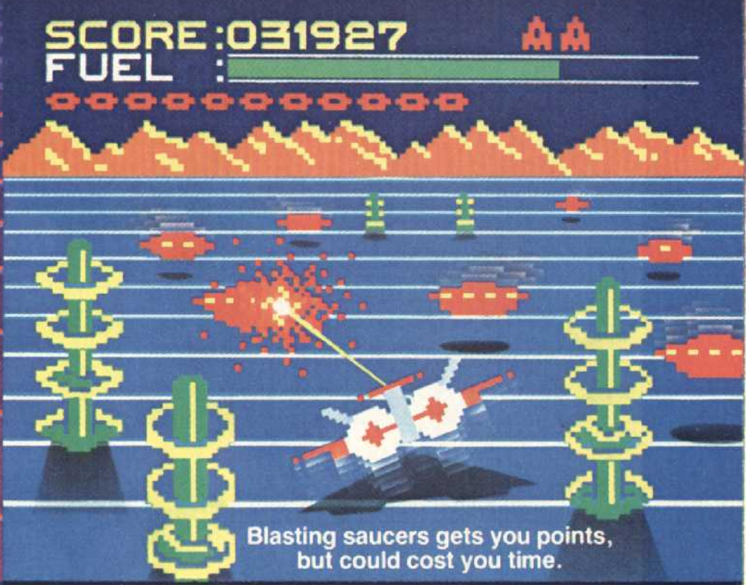
```
1 REM BLUE TO GREEN
2 REM BY GENE DEUTCH
3 REM 33 DOGWOOD DR.
4 REM JACKSON,NJ
5 REM 08527
10 FORM=0TO65:READN:POKE7168+M,N:NEXT
20 DATA169,128,141,19,145,169,0,133,1,133,2,169,127,141,34,145,162,119,236,32,14
5
30 DATA208,4,169,1,133,1,169,255,141,34,145,162,118,236,17,145,208,4,169,22,133,
1
40 DATA162,110,236,17,145,208,4,169,1,133,2,162,122,236,17,145,208,4,169,22,133,
2,96
100 REM HIDDEN MAZE:
110 PRINT"■";:GOSUB 360:GOSUB 480
120 PP=253
125 POKE36879,250
130 POKESCR+PP,5:POKE CMEM+PP,2
140 DIM DIR(3)
150 DIR(0)=22:DIR(1)=23:DIR(2)=21:DIR(3)=1
160 T=TI
170 FOR I=0 TO 3
180 POKE CMEM+PP+DIR(I),5
190 POKE CMEM+PP-DIR(I),5
200 NEXT I
210 POKE 37154,127:X=(NOTPEEK(37151))AND60-((PEEK(37152)AND128)=0):POKE37154,255
211 IFX=0THEN 210
215 TP=PP-22*((XAND8)>0)+22*((XAND4)>0)-((XAND1)>0)+((XAND16)>0)
220 CHR=-(3*((XAND16)>0)+4*((XAND1)>0)+5*((XAND4)>0)+6*((XAND8)>0))
230 IFCHR<3ORCHR>6THENCHR=5
240 IF(XAND32)THENPOKECC,8:FORW=1TO2000:NEXT:POKECC,27:FORW=1TO2000:NEXT
250 IFPEEK(SC+TP)<>32THEN 270
260 POKE SCR+PP,32:POKE SCR+TP,CHR:POKE CMEM+TP,2:PP=TP
270 IFPP<>23 THEN 170
280 FORI=1TO100:POKECCTRL,255*RND(0):NEXT:POKECCTRL,27
290 PRINT"■■GOOD GAME!!":POKE36869,240
300 SEC=INT((TI-T)/60)
310 PRINT"■IN";SEC;" SECONDS"
320 PRINT:PRINT"■■PRESS SPACE AGAIN!■"
340 GETA$:IFA$=""THEN340
350 RUN
360 REM LOAD CHARACTER SET
365 CHSET=7168:POKE51,240:POKE52,CH/256-1:POKE55,240:POKE56,CH/256-1
370 FORI=0TO7:POKECH+256+I,0:NEXT
380 READA:IFA=-1THENRETURN
390 FORJ=0TO7:READB:POKECHSET+A*8+J,B:NEXTJ
400 GOTO380
410 DATA3,0,32,106,245,106,32,0,0
420 DATA4,0,4,86,175,86,4,0,0
430 DATA5,16,56,124,16,40,16,40,16
440 DATA6,16,40,16,40,16,124,56,16
441 DATA7,255,255,255,255,255,255,255,255
470 DATA-1
480 POKE36869,255
485 PRINT"■■■■■■■■■■■■■■■■■■■■■■■■■■■■  TURN BLUE TO GREEN!■";
490 SC=7680:CMEM=38400:CCTRL=36879
500 DIMA(3):A(0)=2:A(1)=-44:A(2)=-2:A(3)=44
510 A=SC+23:WL=7:HL=32
520 FORI=1TO21:PRINT"■GGGGGGGGGGGGGGGGGGG":NEXT:POKEA,5
530 J=INT(RND(1)*4):X=J:POKESC+505,J+128:POKECM+505,8*RND(0)
540 B=A+A(J)
550 IFPEEK(B)=WLTHENPOKEB,J+1:POKEA+A(J)/2,HL:A=B:GOTO530
560 J=-(J+1)*(J<3):IFJ<>XTHEN 540
570 J=PEEK(A):POKEA,HL:IFJ<5THENA=A-A(J-1):GOTO530
575 PRINT"■22■              ■";:POKESC+505,32
580 RETURN

READY.
```

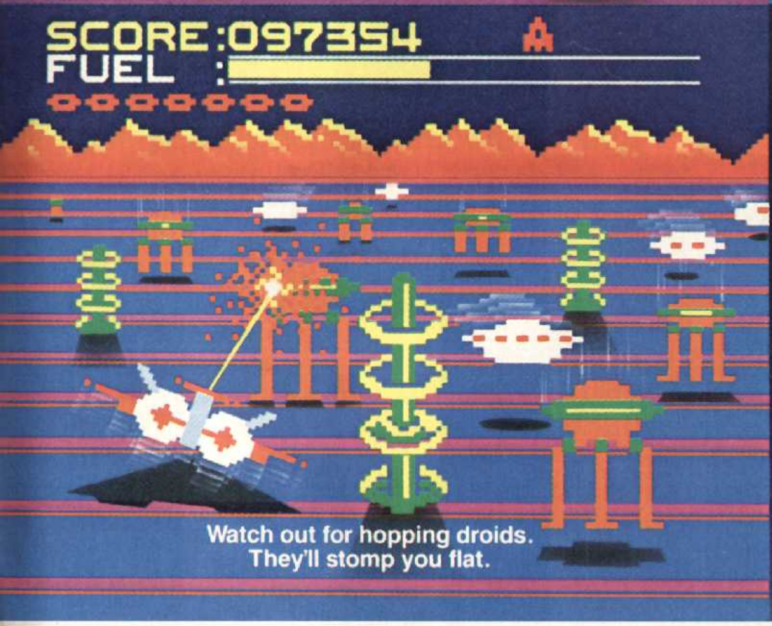
In order for us to consider your entry, we need the following items: a complete computer program, a brief game description, photographs or drawings of the graphics, a picture of you and a self-addressed, stamped envelope. Send it all to: First Screening, Electronic Fun, *350 East 81st St., New York, NY 10028. Include your phone number so we can reach you.*



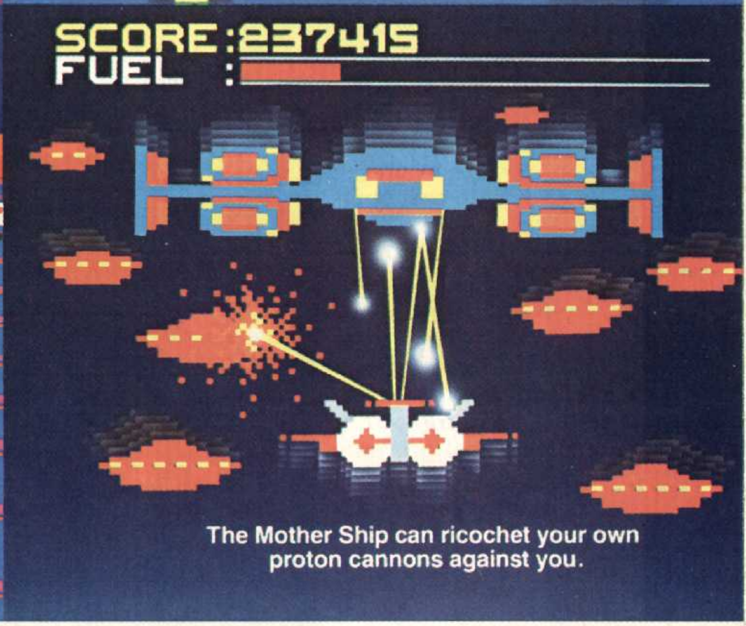
The faster you run the poles, the longer you have to fight.



Blasting saucers gets you points, but could cost you time.

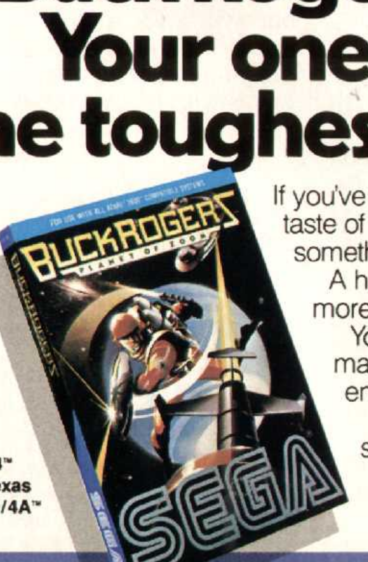


Watch out for hopping droids. They'll stomp you flat.



The Mother Ship can ricochet your own proton cannons against you.

Buck Rogers, Planet of Zoom. Your one chance to defeat the toughest enemy of all. Time.



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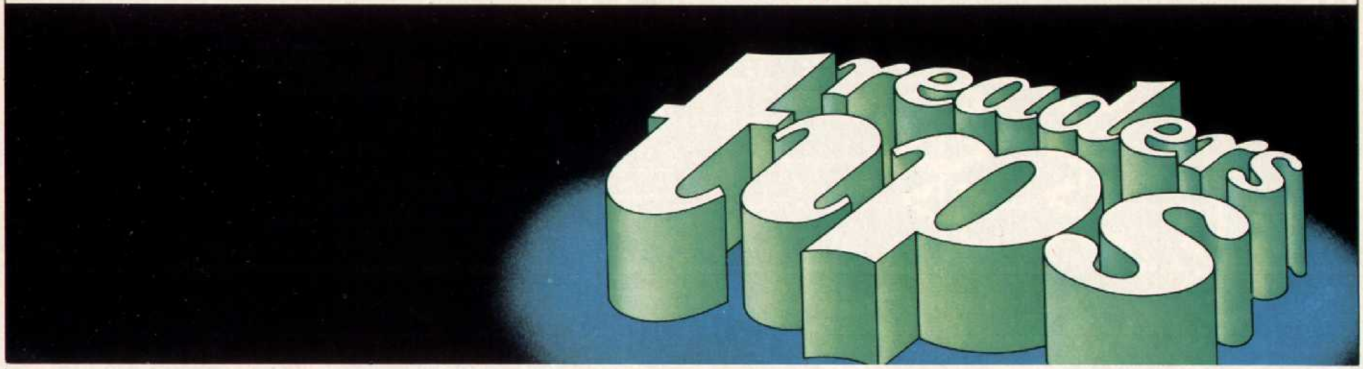


TEMPEST

Here's how to get 40 free game credits on the coin-op. First, complete level eight (the red level) and earn the 188,000 bonus. Then carefully shoot spikes until your score ends in one of these two-digit combinations: 06, 11, 12, 16, 17, 18, 46 or 48. You'll get 40 free games with any of these, except for 46 which gives you a secret jump to the green level, and 48 which gives you 255 extra turns. Atari is putting out a modification that prevents this trick, but most machines don't have it yet.

Jack Downey
Six Park, CA

RIVER RAID

When the river splits, go on the right side if you don't need fuel, because that's where most of the targets are. If you need fuel, go left because that's where most of the fuel tanks are.

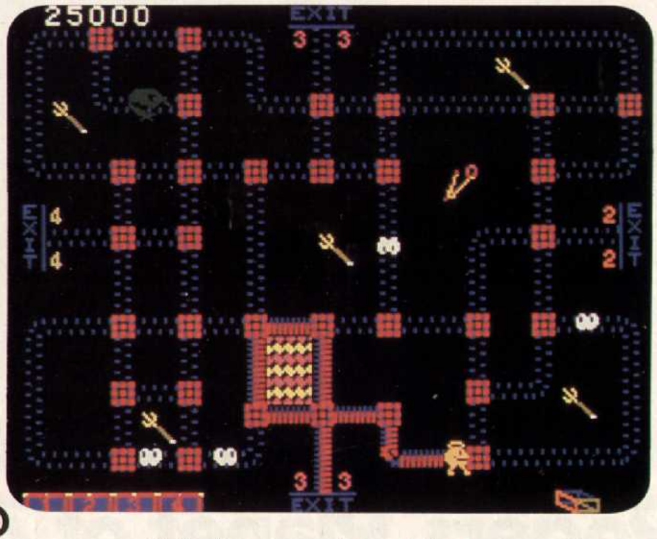
Adam Shaw
Bakersfield, CA

FRONT LINE

This is a great game, but it's also very low-scoring. One simple way to earn a super-high score is to reach the fort at the top of the screen while in a tank. Instead of jumping out and blowing up the fort, just go and sit in the right-hand corner and shoot everything that comes your way. When you tank finally does get hit, *then* jump out and blow up the fort for 1,000 extra points.

David Johnson
Buena Park, CA

PEPPER II



If the Eyes speed up while you're playing, leave the maze and wait until all the eyes in the next maze appear. Then go back to the original maze—everything there will have slowed down.

Brad Robinson
Sacramento, CA

KANGAROO

If you're having trouble getting past the third screen in the 5200 version and you want a lot of bonus points, just wait on the top left branch until a monkey adds to the stack. Once one does, you can jump onto the platform where baby kangaroo awaits you.

David Martinez
East Lansing, MI

STAR WARS

If you start on the easy level, start firing as soon as you can *and with all four buttons.* After you blow up the Death Star in waves one and two, put your cursor between "Death Star Destroyed" and "Bonus 5000X" and fire like crazy. With these hints, you can attain a very high score.

Adam Holmes
Snohomish, WA

Q*BERT

On the VCS version: If you get trapped on a corner cube with Coily about to spring on you, push up on the joystick just as he is about to make his lunge at you. Timing is important, but with a little practice you should be able to consistently jump over Coily and not die. I find this also works with the red balls.

Brian Quinn
Middleton, MA

Use the discs to lure Coily to his doom as often as possible. Any unused discs left at the end of a screen count for half as many points as they would if you used them to dump Coily.

Phil Havel
Findlay, OH

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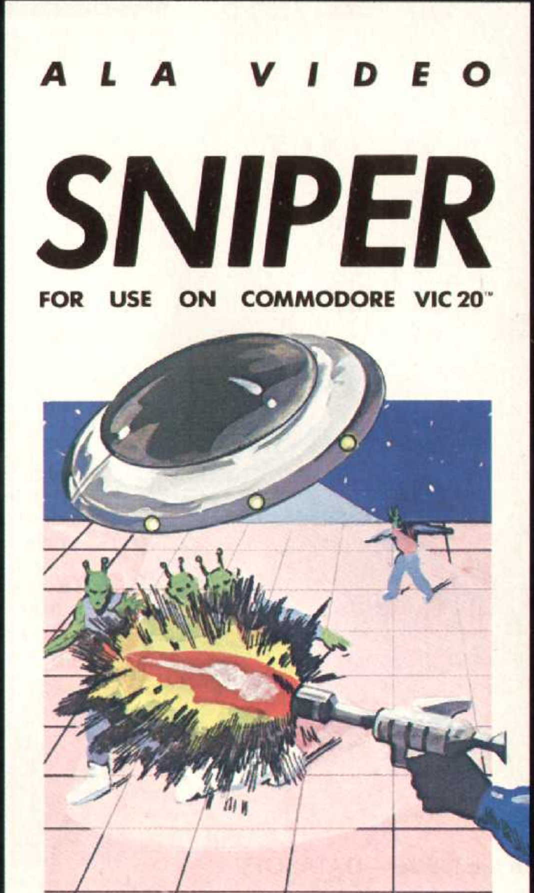
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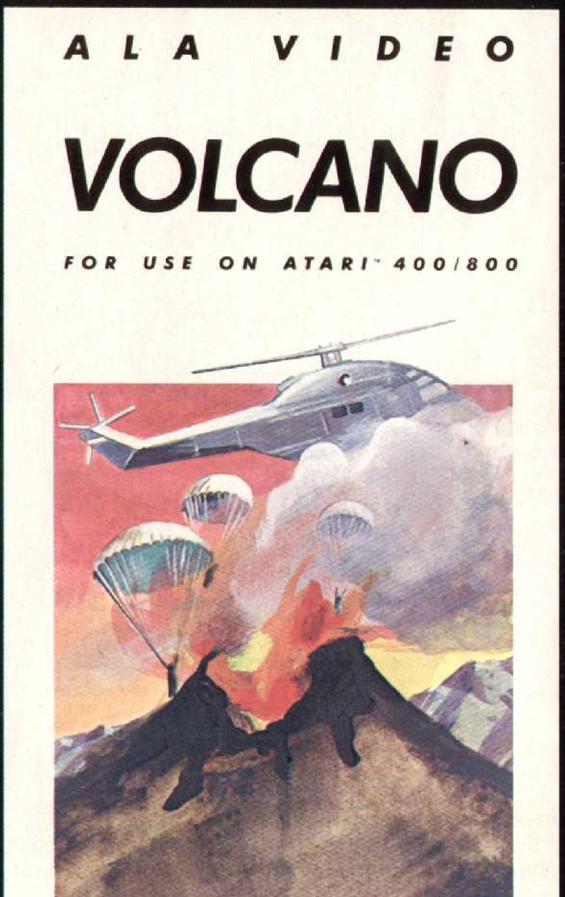
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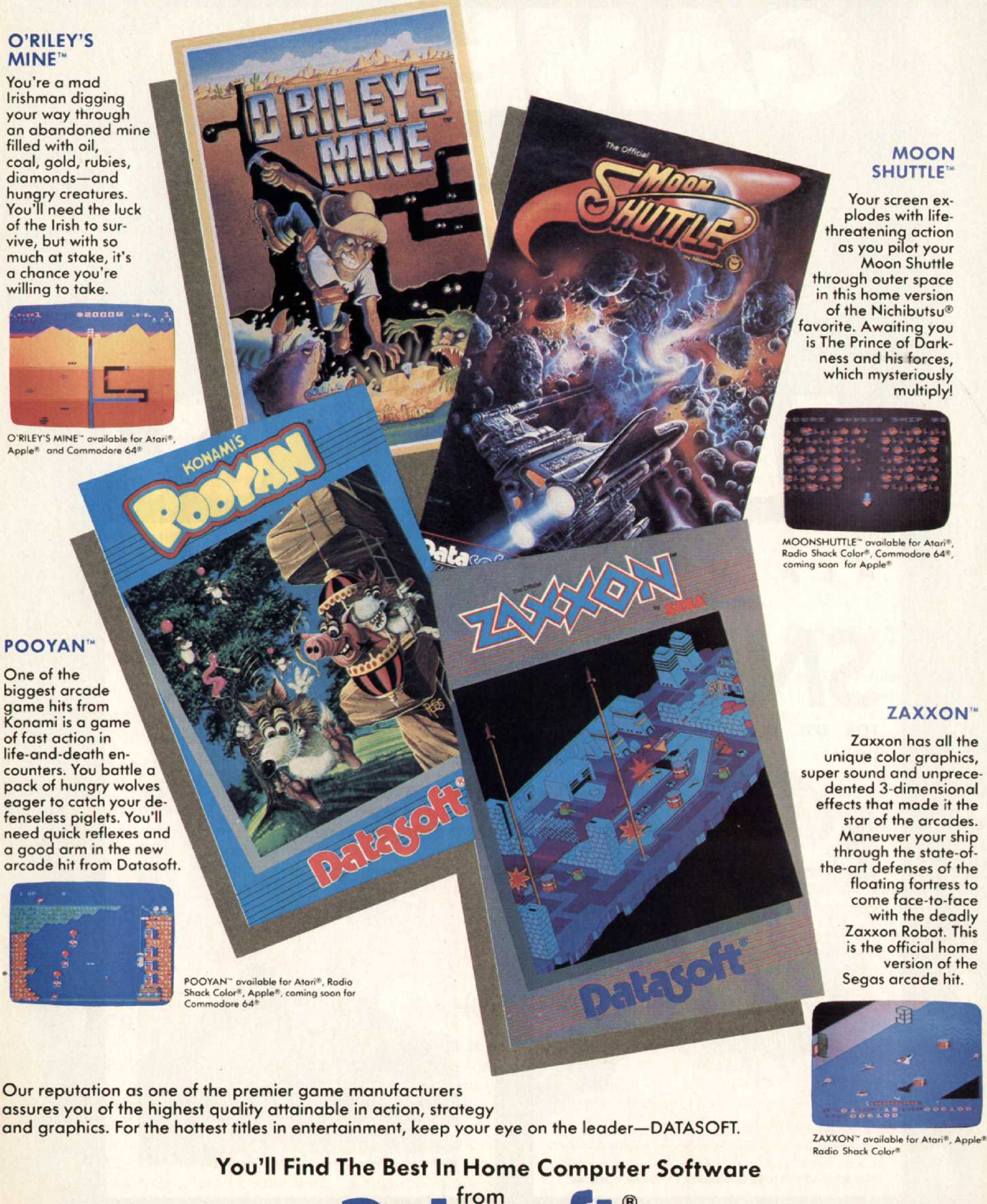

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PHIL WISWELL'S GAMEMAKERS

Continued from 85

music play every time. What I did was something in between. The music always has the same style and character, which prevents you from doing anything really off the wall. But on the other hand, you can largely affect the music. It is indirect: you can't consciously decide where to put a note. But it is still affected by your movements. And people do develop different "sounds" on it.

EF: A friend of mine describes *Moondust* as one of the few legal, healthy ways to get high. Response?

JL: He's got the right idea. I've never been interested in chemical intoxicants, but I'm very, very interested in the idea of intoxication. I think interactive stuff is going to be the greatest high yet and much healthier than drugs.

EF: Do you think MOONDUST is a mass-market game?

JL: Yes. If *Moondust* isn't, something very close to *Moondust* will be. There will be this idea of evocative, interactive art. Instead of particular characters in a given scenario, there's going to be an evocative, interactive thing happening in entertainment on computers.

EF: Was the creation of MOONDUST inspired by anything you can put your finger on?

JL: Oh, lots of things. It has to do with different types of music, Indonesian music and so forth, and it has to do with certain emotions I was involved with at the time, breaking away from Epyx. I know this sounds flaky, but I really think there is an emotional thing about *Moondust* that people respond to and I think that relates to me at the time.

EF: I have a hard time getting a specific sense of control in MOONDUST because there is so much going on.

JL: Right. You've brought up several points about the game. The original idea for *Moondust* was to control a whole bunch of things on screen at once, not just one thing. You're always paying attention to one spot on the screen. I was playing with "how can I make you pay attention to lots of things at once?" You know what it reminds me of? Have you ever played piano?

EF: Unfortunately for others, yes.

JL: It's like learning to play with both hands at once. That's what I was thinking of. I've seen lots of people play *Moondust* better than me, and I've seen kids learn to play it very quickly and do very well. But if you try to figure out everything in your mind, you find you really can't do it. It's very much like making music. You can't just tell your fingers what to do on the piano—you have to get into a rhythm. I was trying to make a game like that.

Continued on page 99

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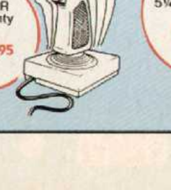

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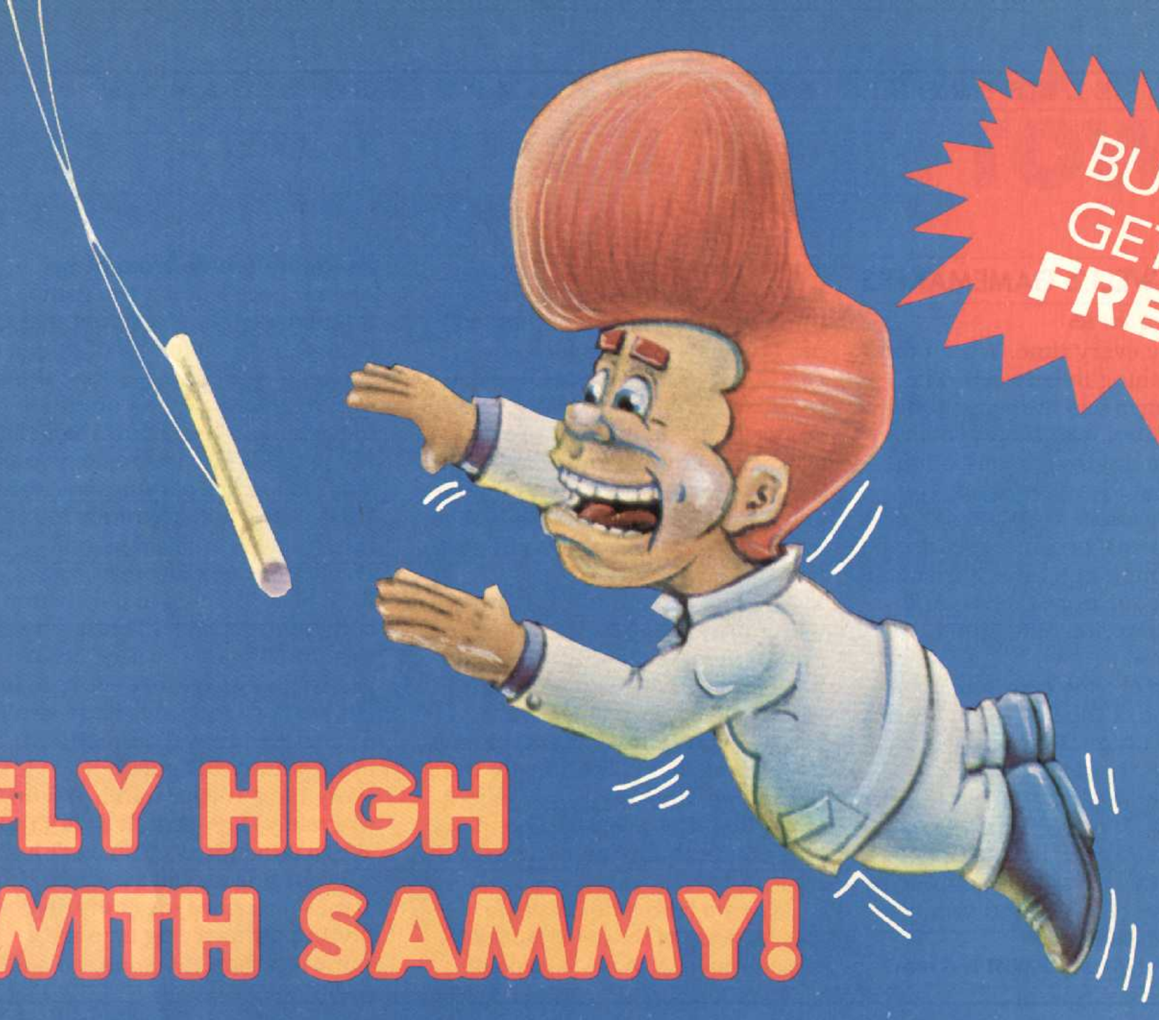

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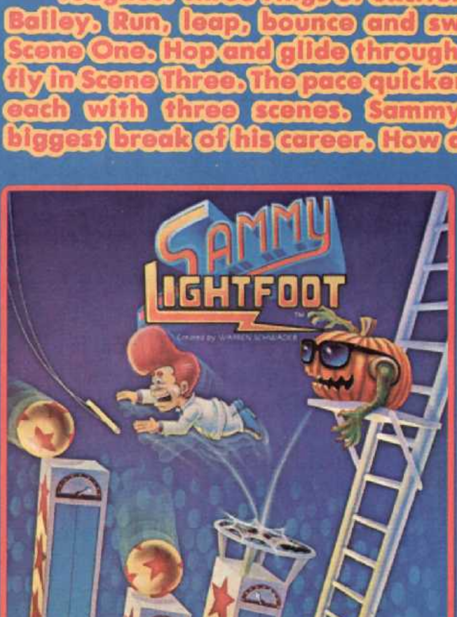
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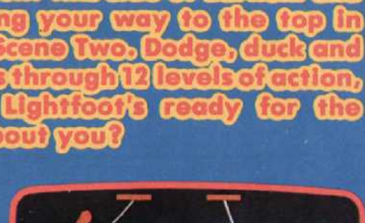

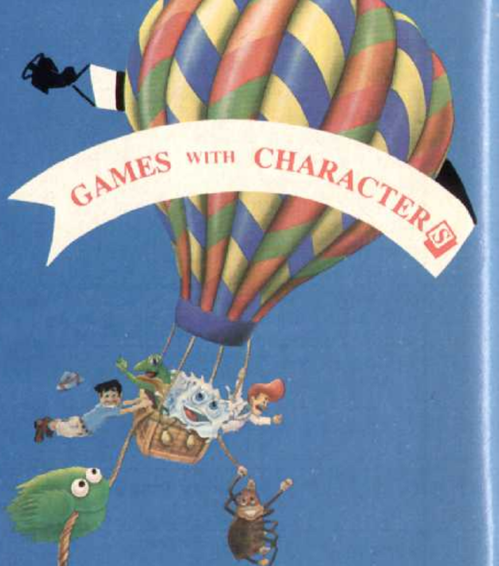
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GAMEMAKERS

Continued from 97

EF: Can MOONDUST be described as a music programming language?

JL: No. You will be able to sound bad on the next game I do. In *Moondust*, you really can't. The *Moondust* music is very fluid and there is a lot of room for variety; but at the same time it does hold itself to a certain set of several thousand chords. It does hold itself to a set of several million progressions that are logical in a way.

EF: You say your next project is really a high-level music programming language. Will this be another game on which music synthesis has been superimposed?

JL: It will be very gamelike. It will be an extensible programming language a little bit like LISP or FORTH. You never program with words; you just move things around and it will make music. It will be a very flexible music language. You will make a fantasy musical instrument and then you'll teach an animal to play it. So it will be done in terms of analogy and is intended for children to understand.

EF: What makes a good game?

JL: It's important to create games with feeling. I don't think you can make something people will like from an intellectual point of view. It has to come out of some emotional sense that is very hard to describe. I really believe that about my game as well as about *Pac-Man*. I think it's really hard to trace exactly how that comes through, but when people do things with passion, things they really care about, it shows. What I'm hoping for is that *Moondust* will grow into a whole new field of interactive music as a thing that exists between the computer world and the record industry. People can write music already, though many think they can't, and if *Moondust* can help un-brainwash them, then it's great.

EF: Do you think high level language/games are the wave of the future?

JL: Absolutely. That's the best thing. Of course, *Moondust* isn't a tool at all. *Moondust* is a piece of interactive visual and music. But I think the whole thing of tools for gamers to work with is important.

EF: What's the satisfaction of designing video games?

JL: Well, this is a weird question. Let me put the answer this way: If you see a movie you like, you just like it. If you play a game you like, you just like it. But making those things is even more enjoyable. You get to see it in its different stages and in its different dimensions. When you make something like that, *you* become the audience. I've gotten the best show of *Moondust* that anybody could have gotten. ☐

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NOW YOU SEE IT

Continued from 41

module at the Toy Fair in February—with all the fanfare that's helped make ColecoVision the fastest selling game system of 1983—Coleco's Big Brains and soothsayers began having second thoughts. All along, it seems the real pride and joy of the Coleco nursery was Adam—a product no one outside Coleco even suspected. It wouldn't make sense, they decided, to divide their efforts by inaugurating two major products. They decided to go with Adam.

Of course, that's not the end of the story. It wasn't until after CES in June—a CES, we might add, that was stolen by the Adam announcement—that Coleco quietly let it be known that the Super Game would be put on hold. And having staked the company's reputation on the Adam system, an all-out effort was required to actually produce it. The ColecoVision assembly line was given over entirely to Adam for awhile. This was a very daring move, especially considering that ColecoVision's main problem a year ago was simply that Coleco couldn't produce enough of them to satisfy consumer demand.

It was yet another set of circumstances that caused Atari to pull The Graduate—the computer keyboard for the VCS that was originally called My First Computer. As is evident from the name change alone, Atari never had a clear idea what the keyboard was all about. Was it, in fact, a "first computer" for grade schoolers or was it a "graduate" for people who were video game players who wanted more computing power without the expense of a whole new machine? These are questions that go right to the heart of marketing.

Everything that goes on between manufacturing and selling falls under the heading of marketing. Marketers decide which people to aim the product at in their advertising; marketers decide what price range the product should be sold in. Marketers also decide what the product should be called and what the packaging should look like. No matter how good your product is, if the marketers don't do their job, no one will buy it.

It's also important for a company like Atari, which makes many computers, not to compete against itself. One reason The Graduate was scrapped may be because Atari marketers felt it was not different enough from the 600 computer. But that's not the main reason. The main reason has to do with psychology.

Like everyone else, business executives find their decisions easier to make if they can formulate some broad guiding principles and follow them. These principles are arrived at after studying reams of statistics—sales figures, growth figures and the like. The big guiding principle for the last year was: The video game will be replaced by the computer. Why? Because computer sales were growing faster than video game sales. Not that people were actually buying more computers than they were game systems this year, just that the computer sales were *growing faster*.

So the people at Atari decided that if video games were giving way to computers, the way to make their number one selling video game more attractive was to make it expandable into a computer. It seemed, as they say, like a good idea at the time. But there were other statistics—mainly the fact that 1983 has been the best year for plain old video games in history—that made The Graduate look like a very risky proposition indeed. Why spend all that money manufacturing and advertising a new product when there were millions of people out there perfectly happy with the old one—and who, if they wanted to buy an inexpensive computer, might easily be persuaded to buy an Atari 600?

If there's a moral in this story it's this: To paraphrase Yogi Berra, "It isn't for sale until it's for sale." Trumpets, fireworks, and yes, even a picture in *Electronic Fun* is no guarantee that a product will actually reach your store.☐

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COMPUTER WORKOUT

Continued from 89

a Multi-Pak Interface, that allows you to plug in up to four cartridges at one time. The particular cartridge that is activated is controlled by a switch on the front of the unit. While this solves part of the problem, it still doesn't allow a game cartridge and a disk to interact with each other. More importantly, however, Radio Shack is charging $179.95 for this expander. For $20 more, you can buy another Color Computer.

A further inconvenience to the user (that could have been solved by spending just a few extra cents) is that there is no power-on indicator lamp. This problem is exacerbated by the fact that the on/off switch is located on the back of the computer so there's no way of knowing whether the computer is on unless it is connected to a television that is also turned on.

Another problem that owners of the Color Computer face is availability of software. Since Radio Shack continues to refuse to distribute other manufacturers' products (unless a special version under the Radio Shack label has been produced) a lot of software manufacturers are ignoring the Color Computer market, so you're not always going to be able to get the best games. Radio Shack has been encouraging outside software developers to produce programs for the computer that would be sold under the Radio Shack label. The latest catalog lists about 75 programs.

In spite of the fact that Radio Shack refuses to carry products that are not marketed under its own label, and in spite of the fact that most other stores won't carry any Radio Shack computer software, there are quite a number of companies that are trying to service the market by selling Color Computer-compatible hardware and software. In addition, there are at least three magazines out that are devoted exclusively to the Color Computer.

Although the Color Computer is being marketed as a game machine, with the OS-9 and FLEX operating systems that are available for it, it could be used for quite a number of serious programming applications.☐

SCREENPLAYS

Continued from 17

between the time you move and the time the aliens react will afford you a chance to get off a bunch of shots unmolested. Also, stick to the bottom of the screen and only retreat to the top in the direst of emergencies.

Acquiring dual firepower is easy. When a trio of oversized satellites appear, shoot for the one in the middle.

Finally, when you reach the chance stage, position yourself in the lower left hand quadrant of the screen. You stand the best chance of hitting all the aliens here.☐

ARTIFICIAL INTELLIGENCE

Continued from 33

known as the "script" concept, which holds that for many common situations in life, there is a scripted course of action that we know to follow. For instance, in a restaurant, we know that we sit down, the waiter brings us menus, we order and then we eat.

Clearly then, one of the most basic approaches to AI is to give computers the ability to perform properly in scripted situations without having to program in every little step. Ideally, we would like to be able to place a comptuer in a fancy restaurant and have it *know* the procedure to follow from ordering drinks, to sniffing the cork of the wine bottle, to leaving the proper amount for a tip. And while this is not in the immediate future, based on certain theories we know it is ultimately possible just as before computers themselves were invented, John von Neumann, a pure mathematician, knew that a computer was possible based simply on certain mathematical truths.

One thing, however, is certain. As research into AI progresses, not only will we understand how to make a computer think, we will also advance our knowledge of how we think as well and the better we understand our own thinking machine, the more easily we will be able to build a machine that thinks like we do.☐

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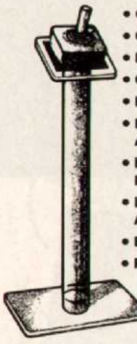

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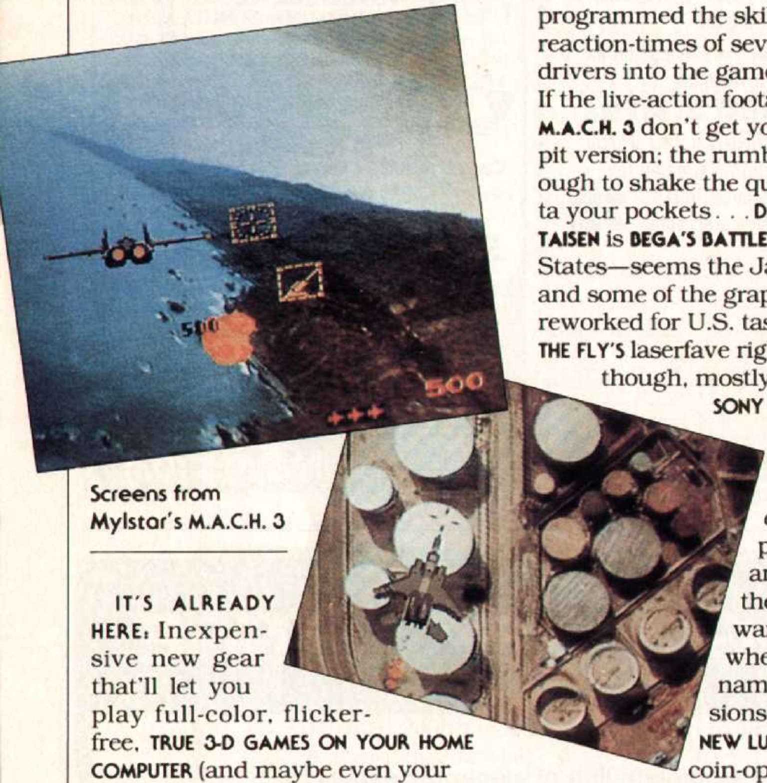
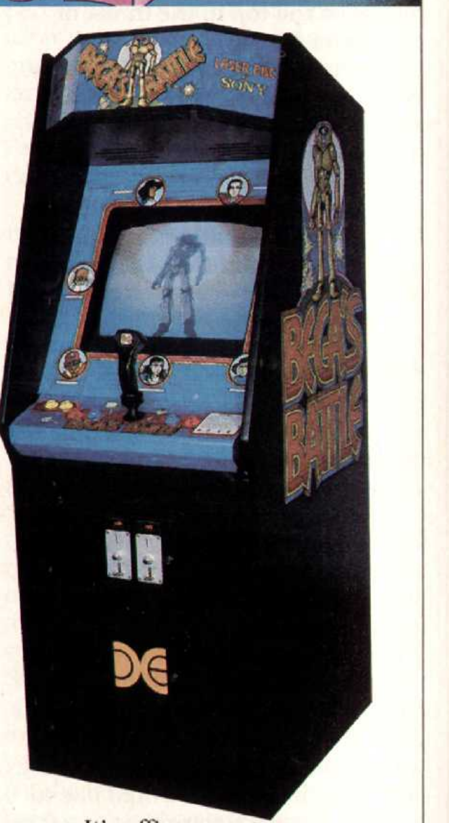
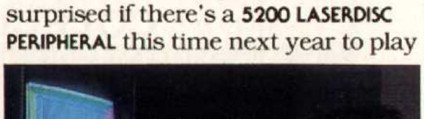


Screens from Mylstar's **M.A.C.H. 3**

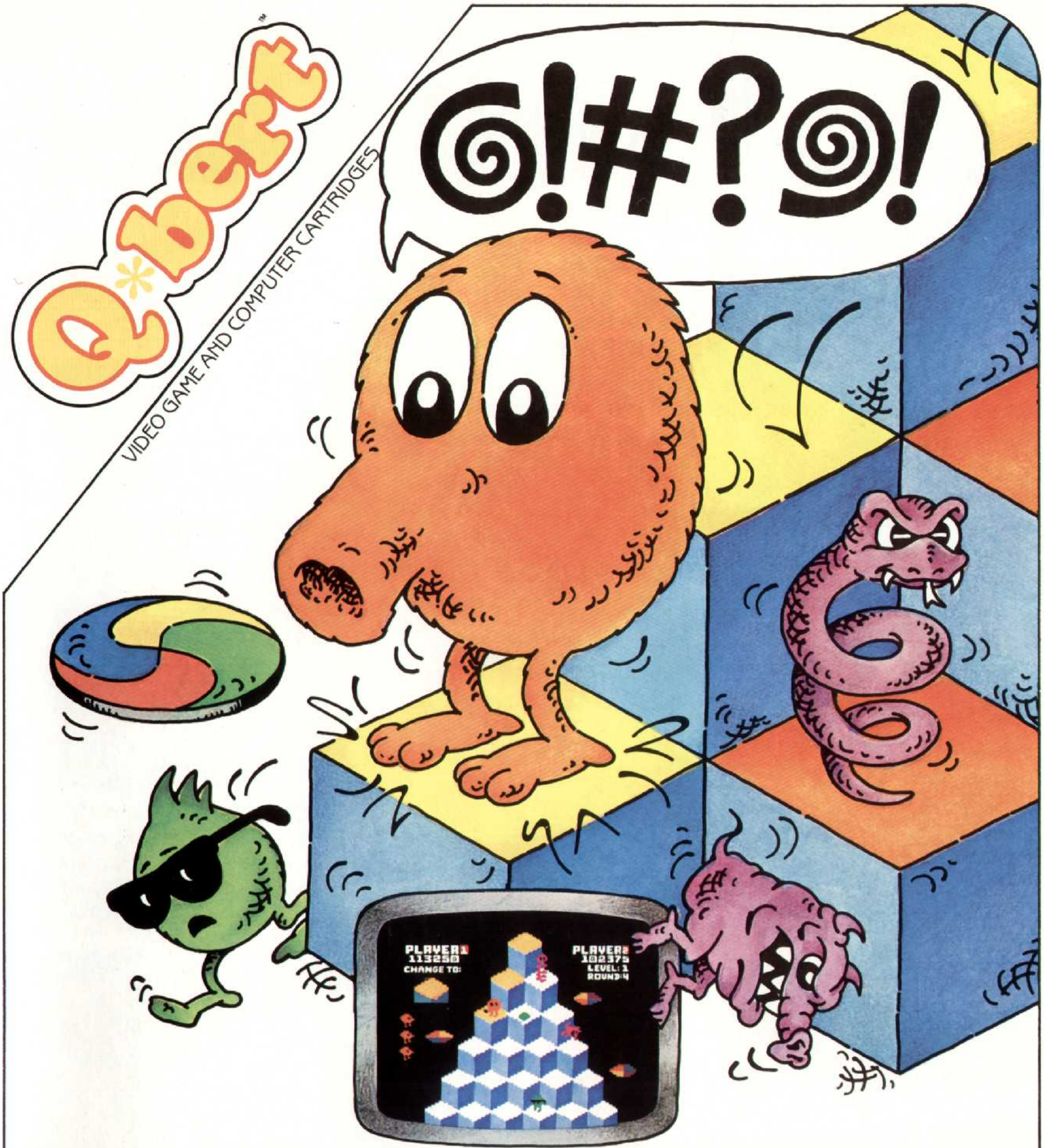
IT'S ALREADY HERE: Inexpensive new gear that'll let you play full-color, flicker-free, **TRUE 3-D GAMES ON YOUR HOME COMPUTER** (and maybe even your VCS). Developed by **STEREOGRAPHICS** of San Rafael, California, it's called the **STEREODIMENSIONAL** system: A pair of lightweight "electro-optical shutter" glasses and a computerized black box that both hook up to any vidgame/computer monitor and provide the most accurate, clean, true-to-life 3-D effect **THE FLY** has ever seen. With these specs on, you sit anywhere you like and look at the screen from any angle—no flattening, no blurring, no headaches, no bull. The comany already has a couple of Stereodimensional game prototypes in the works, and while they don't sell direct to you and me, they've got quite a few big-name vidgame companies *very* excited . . . **LASERDISC UPDATES:** Feel like a doofus 'cause you can't cut **LASER GRAND PRIX**, even though it features the **FUJI INTERNATIONAL SPEEDWAY** you tore up in **POLE POSITION**? Don't feel bad: **TAITO** says it programmed the skills and actual reaction-times of several pro race drivers into the game's software . . . If the live-action footage in Mylstar's **M.A.C.H. 3** don't get you, try the cockpit version; the rumble seat is enough to shake the quarters right outta your pockets . . . **DATA EAST'S GENMA TAISEN** is **BEGA'S BATTLE** over here in the States—seems the Japanese name and some of the graphics had to be reworked for U.S. tastes. It's still the **THE FLY'S** laserfave right now, though, mostly because of the **SONY** character (he's black, he rollerskates and teleports, *and* he digs punk rock—and just look at the cabinet if you want to know where he got his name)...Home versions of those two **NEW LUCASFILM/ATARI** coin-ops I told you about last month should show up this summer. And please don't be surprised if there's a **5200 LASERDISC PERIPHERAL** this time next year to play 'em on...It's official: **COLEO** *will* be producing a **LASER-DISC ADD-ON FOR ADAM** owners by next Christmas at the latest. Gee, I wonder what the first game will be (yuk, yuk)... Sorry gang: Both of those Atari computer add-ons for the VCS and 5200 are lunchmeat for the foreseeable future...**MAXIMUM EDITOR GEORGE K.** says I either give out with the **INITIAL ATARISOFT MULTIPLE-FORMAT RELEASE LIST** or Eat Big Swat, so here goes: **DEFENDER, GALAXIAN, CENTIPEDE** for **COLECO/INTELLIVISION; PAC-MAN, DONKEY KONG** for **INTELLIVISION; DIG DUG, PAC-MAN, CENTIPEDE, DEFENDER, STARGATE, ROBOTRON, GALAXIAN** for **IBM PC/APPLE/C-64/VIC/TI-99**; and **SYNAPSE**'s **PICNIC PARANOIA, SHAMUS, PROTECTOR II, SUPER STORM** (formerly **SLIME**) for **TI**. Regards, gang...

"The Fly"





Prototype Stereodimensional™ 3D game in action (above) and the system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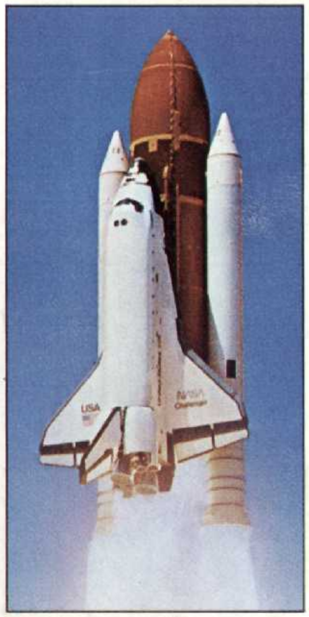

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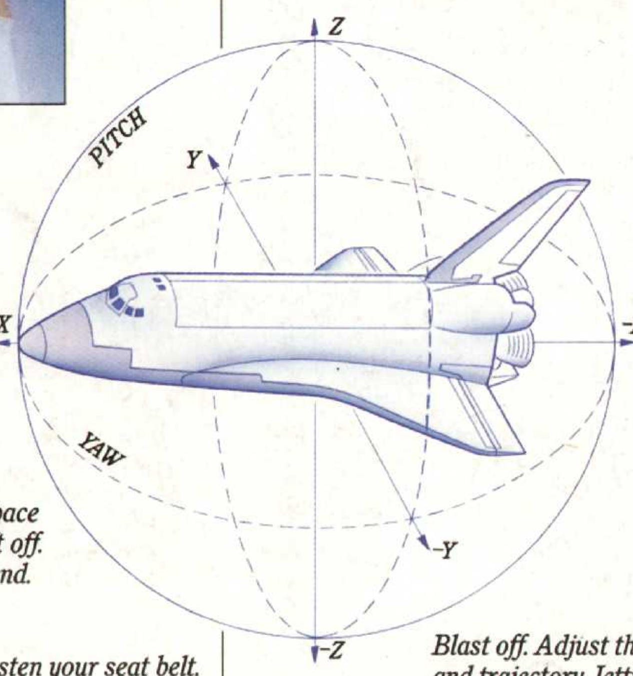
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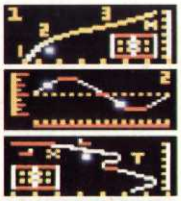

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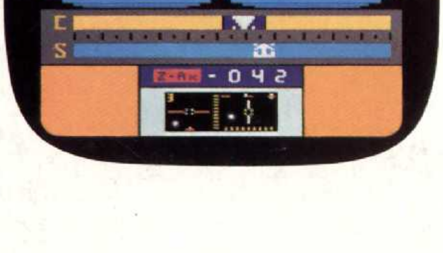

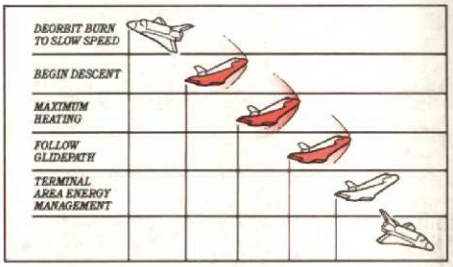
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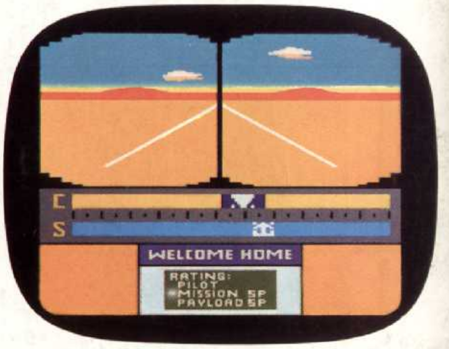
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